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Volume 22 Number 8 August 2001

MAINLINE

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Changing of the guard

By Kevin Larson

This month we welcome Terry Thompson as the new editor of Model Railroader, and I'm pretty sure that's a happy environment and suggestion. Melonie Bushnaloch as her previous to a managing editor.

Terry Thompson, 54, a native native, will be new to most of you. I've had the pleasure of working with him over the past six years. Until he's been on the south of both Model Railroader and Railroader. I was also Terry's published editor. In this become editor of Railroader Hobbies (he's lengthy resume, and have work my duties of model railroading and making magazines.

Terry's background makes him ideally suited for this position. A native of Indiana, Ohio, he became a fan of the Akron Trains Council, the Baltimore & Ohio, and railroading in general at an early age. He's been a reader of MR since he was 10 and has modeled in HO, O, and S scale.

In addition to his training in journalism, Terry earned an MBA in business from Case Western Reserve University and holds the PhD in History from The Ohio State University. Before coming to Kalmbach, he taught at Ohio State and prior to that worked for the Chicago & North Western.

Jim Kelly, a Detroit area native, retired to Arizona. It's also worth it that he will not be overseeing editorial duties, but for the plan calls every so managing editor.

She always had a knack for coming a little bonus on all the projects he wrote. We'll miss her on around the office and. Her farewell message is on the Assistant Case Master's Opinion piece on page 108.

Melonie Bushnaloch, the new managing editor of MR, has been an assistant editor for the past six years. She joins Terry and the gained from copy editing, managing the Model Railroad's workflow, and making sure all deadlines are met, as well as editing and writing her own articles.

Melonie, who's a graduate of Indiana University in Bloomington, understands the ins and outs of producing a quality magazine on schedule.

I won't say more now about changes on our handheld. Kirk Bennett, publisher Trains of Thought columnist, is over a contributing editor as well. Kirk has been really consistent, and now he'll have time to write feature articles for us on a regular basis working from his home in Kirk Ariana. And you'll see other Trains Magazine staff have been pressed to editor of more work.

We have a talented team [illegible] with a very blend of model railroad experience and business plus knowledge of magazine publishing that will serve our readers well. We are looking for new more processes editor to complete the editorial staff. See the ad on page 91.

As for me, I will now take my turn as assistant editor and return to the [illegible] division.

Model Railroader

Model Railroading is Fun

May 2007 Volume 101, Number 5

Number ____ [illegible]

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News & Products

Technology trend continues

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More than 20,000 hobbyists attend National Train Show in Philadelphia

Will scale Walthers Mainline Turboliner: A preproduction sample of the famous gas turbine-powered articulated passenger train was shown by Rapido Trains. The Turboliner includes two Power Dome Cars and one intermediate car. Both Power Dome Cars have five axle diesel-electric with flywheel sound decoders and speakers that operate on both DC and Digital Command Control, and full-width operating diaphragms.

Walthers lowers locomotive prices

Milw. St. Walthers, Inc., of Milwaukee, Wisc., announced that it has lowered the prices on most of its Life-Like Premium Steam, Proto 1000, and Proto 2000 series locomotives in N and HO scales. "We want to get models in your hands as soon as possible," said John Dantuono, Walthers vice president of marketing and sales. The new lower prices will go into effect immediately. The revised prices can be seen on the Walthers Web site at www.walthers.com.

Three elected to council

Three members of the model railroad industry were elected to serve on the Hobbies Council of Hobby Industry Association. Hobby Lobby's Clarence Fredenburg, Plasma Sales and Promotions Director, and Kenny Monahan, Director, Hobby and Craft Division, Hobby Lobby Stores, Inc., were all elected to three-year terms.

Other members of the Hobbies Council include Chad Dyer, Hobbico; Rick Dickey, Craft Supply Hall Pearce; Kurt Gramberg, Rod Stewart Stamping; Rick Hoen, Monarch Coupling; and Tara Thompson, Dover Publications. Fredenburg, who was elected to a second term, was also elected as secretary/treasurer. Rick Dickey was also appointed to the position of vice president of the association's marketing committee.

MR staff change

There has been a staff change at Model Railroader magazine. Barb Rychlewski, our editorial assistant, moved after 15 years with the magazine. A valued member of the MR team, Barb took care of many tasks, from approving reader questions to updating the online Evening Scenes section.

Barb will be replaced by Tara Nesen, our former editorial intern. Tara graduated from Marquette University in December 2005 with a journalism degree. While in college, Tara worked for the Marquette Tribune and also interned with Milwaukee Magazine. In addition to her day-to-day duties as an editorial assistant, Tara is also working on the MR Web site.

Tara Nesen

2006 hall of fame inductees

Laura Fish, Bernd Laris, and the late Fred Mayo were inducted into the Model Railroad Hobbyist Council of the Hobby Industry Association Hall of Fame during the recent convention in Philadelphia.

Laura got in the industry working at Fish in Hobby Stores in New York City in the late 1960s. It was her single most important love before Craft Traks.

Bernd Laris is one hardworking man when it comes to his role in the development of digital command control (DCC) and sound systems. He chairs the NMRA DCC Lead to the National Model Railroad Association.

The late Fred Mayo built a solid foundation during the 1970s and '80s and was also a part of many successful Atlanta conventions in the 1970s.

Contest update

A downloadable track template for our Layout Design Contest is now available on our Web site. Look under Site Features and click on Layout Design Contest.

N scale Electric Mexico Express EF-beast comparison. The first sound-equipped N-scale locomotive was shown by Precision Craft Models. The G1Ns are decorated for Great Northern, Baltimore & Ohio Chicago, Burlington & Quincy, New York Central (NYC), Pennsylvania RR (PRR), Southern Pacific (SP), Union Pacific (UP), and undecorated. The G1Ns are available delivered by NYC, PRR, SP, and UP. The ready-to-run model has sprung die-

phragms, separately applied details, and constant intensity, directional headlights. All of the models are offered with (MSRP $249.98) or without (MSRP $219.98) a DCC/SB Electronics Sidetrack (Mini-Digital Command Control) and sound system.

S scale Baltimore & Ohio class EM-1 & E-1 electric locomotives. B-Helper Service displayed its new ready-to-run locomotive. The E-1 is decorated for B&O, Alphabet, Pyramid & Santa Fe, Chicago & North Western, Erie Mainline Central, New York Central, Southern Ry., Western Maryland, and painted black but unlettered. The model has a die-cast cast motor, smoke unit, and die-cast metal boiler and cab. Direct-current models are priced at $249.95, and models with Digital Command Control and sound at $329.95. Lee-Mate control system (MTS) $299.95.

S scale Electric Mexico Express GE70B and GE70C diesel locomotives. Modern era and road diesels are now available from American 2 Line. The GE70Bs are offered decorated for Norfolk Southern and Union Pacific, and the GE70 is painted for Canadian National. The injection-molded plastic models, which sell for $219, have brass Pittsburgh motors and light-emitting diode headlights.

News products at the 2006 National Train Show

HO scale locomotives

General Electric U25B diesel locomotive. Overland Transporting Line, Milwaukee Road, Pennsylvania, Rio Grande, Union Pacific, Wisconsin Central, Illinois Central, and Santa Fe. Features: 4-pole can motor, 4-pt. flywheel, metal gears, operating headlight, and factory-applied details. $159.95 as DA/DR, $179.95 with Digital Command Control and sound with after the rebound. Bachmann Industries Incorporated, Equipment Line Division, Manufacturing.

Lima Hamilton 260-, 1000-, and 1200-hp. diesel switchers. Each model shell with detail parts and factory-installed mechanism. $44.95. Kit Models

HO scale freight cars

Pennsylvania 50-class F30 Railcars. Five-color box with detail parts and decals for six models or variations. Item #20-3. Preiser & Associates

Northern Pacific 50-foot single-sheathed Y-6 **stock automobile boxcar.** Boxes kit with detail parts, Schlegel mechanical roofs, underframe, and body. Kits. Speed wheel Models

HO scale passenger cars

Pullman 14-section heavyweight sleeper. Milwaukee Road, Pennsylvania, $36 (sold out). Used cars lined with schemes. Pullman-Standard and New York Central versions, each featuring Pullman-Standard sealed, with underbody details, metal wheelsets, and Kadee no. 5 couplers. $44.95 each. Broadway Limited.

HO scale commuter equipment

Bombardier Bi-Level Pennsylvania Transit Authority "Diamond Jay" transit cars. Five-piece sets: lead shell, underbody detail, interior seats, Bowser drive and trucks, Kadee-compatible coupler pockets, and magnetic knuckle couplers. Shell kits also available. Price to be announced. Imperial Models Productions.

Chicago Transit Authority 4000-5000 series "Baby" elevated cars. Resin models. Come motor with 16-inch-by-eight-inch drive to each axle. Three-car, 4-lapsed-built, painted factory-red-orange with and painted green-and-cream CTA. $179. Empire, Inc.

HO scale structures

Jonesboro City, Wis., depot. Laser-cut wood kit. Based on two Core prototypes. Price to be announced. LK Laser.

Erie RR Electronics viaduct. Mounted plaster concrete. Measures 21½" x 12¼" x 4¾". Uses HO fluorescent bulb (not 7½" to bridge), set $5. Model Rectifier Corporation.

Cheyenne Machine Shop. Laser-cut wood kit with white metal details and metal trees. $27.95. Rio Grande Models.

HO scale details and accessories

Coal loads. For Kadee American no. 4 hoppers. Black coal. Bags with 2-way fixing and fastening wire. Weighs 0.035 lb. Weights for loads available separately. Three-pack $2.95. Kadee Quality Products Co.

Schnauzer. Cast resin; tail and pipe-holder wood details, and full coping. Measures 3" x 1½". $3.95. Model Train Studios.

Z scale train sets

Illinois Central Diamond Special. 4-4-0 steam locomotive and five-axle steam passenger driving

4-4-0 scale Northwestern Locomotive Works. A 4-4-0 steam locomotive in preproduction sample at Manhattan's new steam locomotive was on display in the firm's hometown. The ready-to-run model will be decorated for Atlanta Central, Maryland & Pennsylvania, Havenport Air Lines, Southern Fly, and painted black but unlettered. The model, priced at $540, will have an eight-pin plug for Digital Command Control, die-cast metal boiler, chassis, and frame, and metal Walschaerts valve gear.

HO scale United States Railroad Administration heavy 2-10-2 steam locomotive. Kalmbach had several new items on display, including a preproduction sample of its new ready-to-run steam locomotive. The 2-10-2 will be delivered for Bessemer & Lake Erie and has other railroads plus painted black but unlettered. The model will be offered in DC for $325 and with Digital Command Control and a QSA Quantum sound system for $424. Both versions will have a five-pole skew-wound motor, KW-25 overhead catenary, and optional traction tires.

HO scale town car wood diorama kit. Pagget Road is the newest offering from Bar Mills Scale Model Works. The diorama kit includes five laser-cut wood structures, including Plattsboro Furniture Co., Morgan's Corner Pharmacy, Skinner's Salvage, Harry's Hideaway Tavern, and debris from a ruined building. Only 500 diorama kits will be produced, and they'll sell for $250 each.

O scale Electro-Motive Division SD70ACe diesel locomotive. New from Overland Models is this modern union Pacific diesel locomotive decorated in the Missouri Pacific heritage scheme. The ready-to-run scale model is factory painted and lettered and features operating headlights and strobe lights. The manufacturer's suggested retail price for the SD70ACe is $3,695. The firm will also be offering models of the SD70MAC decorated in the Denver & Rio Grande Western heritage scheme.

HO scale Alco PA-1/2 diesel locomotive. A painted sample of the newest Trainman line diesel locomotive was on display at the Nitty booth. The PA-1/2 will be offered decorated for New York Central, Chicago & North Western, Southern Pacific, and undecorated. The model will have an eight-pin plug for a Digital Command Control decoder, die-cast metal frame, scribed plastic handrails, locating stirrups for grab irons, and railroad-specific details. The ready-to-run model will list priced at $79.95 ($99.95 for the undecorated model).

Allied Division & Rio Grande Western K-27 2-8-2 Mikado. Sherwood Models, a division of SoundTrace, showed samples of its narrow gauge steam locomotive. The die-cast metal model has a can motor with balanced flywheel, optional SoundTrace Tsunami sound decoder, plastic, metal, and resin details and individual grab irons and handrails. The model painted in various Denver & Rio Grande Western and Rio Grande Southern schemes, operates on DC and Digital Command Control. The K-27 is priced between $350 and $360.

and deck-arch plate girder, stone arches, and city overlays. 27x21. Available from Walthers, Inc.

O scale structures

Masonry structures. 1930s industrial building, brick plant, coal dump shed, coaler's gas station, fire station, freight depot, intermodal yard office, large industrial building, library, modern dairy, mini skyline, police station, post office, and pump house and water tower. Structures have lasers or resin and include undercoated white kit and instructions. $14.95 to $49.95 each. Also available in N scale. Sievers.

Multiple scale passenger trains

General Motors Aerotrain. In Chrome, Engine & Dome (E) General Motors demonstrator, New York Central, Pennsylvania RR, Rock Island, Union Pacific and painted white two-unit powered diesel sets with dual PA chassis, dual transformers and sound, and single (no PA) and twin (right) unpowered B units (PB-1) with dummy board for optional simultaneous sound and light-emitting diode interior lighting. Prototype set includes two engines and observation cars. HO and N scales. $429.95. Bowser Manufacturing, Inc.

[illegible] scale General Electric U30B diesel locomotive (Atlas Model Railroad Co. sponsored many modelers when it displayed preproduction shell samples for its new four-axle GE diesel locomotive. The U30B will be offered with two- and four-wheel cabs and prototype-specific door latches and louvers. Price, road names, and additional details will be announced at a later date.

Block Command Station. This new multi-protocol command station is being offered by Electronic Solutions (dba The Block Command Station, which sells for $899, supports Digital Command Control (DCC), Motorola/Motorola, and Selectrix operating systems. The device can control as many as 20 functions per engine and has RS232 (serial communication) built in.

Multiple-scale freight car trucks. Resin-steam brake equipment trucks have been released by Grayson Enterprises. Set 1040 (40 ton, $10.99) includes two trucks, two gears, and one flywheel. Set 1101 (50 ton, $11.99) features two trucks, two gearboxes, and one flywheel. Set 1060 (100 ton, $16.99) has one truck, one flywheel, and two gearboxes.

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The Tall Steel Viaduct

News & Products

A recent PRR 50-foot, outside-braced boxcar, Micro-Trains Line Co. introduced this ready-to-run model. The injection-molded plastic boxcar, decorated for Norfolk Southern (pre-1982 company), has a diagonally applied brake wheel, 10-foot Youngstown sliding doors, and Magne-Matic couplers. The price for the PRR 50-foot boxcar will be announced at a later date.

IMI recently introduced Tropicana & Santa Fe citrus generator car no. 1305. New from The Coach Yard is this ready-to-run brass model based on a Santa Fe prototype. Steam generator car no. 1351 in a factory-painted brass model decorated in American Revolution Bicentennial colors. The car is priced at $350.

Worthington recently added three new High of the South Models hard samples from its line of palm tree kits designed by N through G scales. Shown from left to right are a Canary Island date palm, cabbal palmetto, coconut palm, and Washingtonia fan palm. The kits, priced between $16 and $45, include resin trunks, vinyl fronds, and floral wire.

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Once a division rivals with an EMD F unit, might the race be notably, and we get the new PL42AC, now full steel bargain lower degree

New for 2004: Alstom's PL42AC

Everpost builds 150 I-cars up on a new diesel passenger locomotive

French investment and rail builder Alstom will gain the rights of C.A. locomotive manufacturer in 2000 when the first of a 10-year order for its new PL42AC is delivered to commuter railroad Sant Amour Rivieres & and Shield Power Corporation. The 3,000-hp unit is the latest diesel and has Prop-Cos in Canada and the U.S. to compete with leading locomotive builder EMD and GE Freight Transportation, which successfully competed against Alstom's Genesis locomotive for the Amtrak order.

The units are a multi-powered version, using components and designs from Alstom's European locomotive and diesel engines and are a variation from EMD's F59PHI design. Alstom is critical to GE Amtrak's Cruise Transport Division (SAC) Electric Train and Power Division.

Alstom's main selling point is cost-competitive design engineering. U.S. rail fleets have a number of "short fleets" for the up to locomotive. EMD by recent is to supply Amtrak and parts in the form the Sydney, Sydney, and non-conforming cabin. Most cabin models to separate powered HEP locomotive, a single fleet of 200,000 lbs. GE engines a locomotive variety, now who are for and the Sydney.

The PL42AC unit is 57'2" in. five-axle diesel-electric. While the old unit was running low in comfort, and to the cabin-only & was more or less new. Cruise cost.

Alstom has the unit has also an EMD Bogies Fit Proposal. It powered a locomotive with its cabin with an underside air filter [illegible] compared to control bearings to cut down noise and vibration. The controls still be similar to those on the new Amtrak cab to the electric diesel-hydraulic to Ashtabula to Rail [illegible] The power source was reduced for combined to 'with NOT's coming fleet and was of transmission, and Cruise. The 3,0 is an EMD product, and that's all we have as our tractor power so. he said. 'We decide should have to problems get long up to speed quickly.'

EMD is more than a top place of equipment to the people," said Greg Peterson an EMD aviation marketer. "We to conduct with Alstom on a number of environmental projects in the past. So now the Alstom unit is in many general maintenance to to the [illegible] locomotive.'

EMD is also providing engineers to Alstom as they to have to design compliance tests and pre-to-start cycle with EMD standards and the Sant Amour to Rail Transportation Administration Standards and the Association of Railroads. After an 11-unit order to the Canadian at the end, Alstom and EMD, Canada plant, and Alstom-Montreal line by [illegible]

The first two PL42AC's will be assembled at Alstom, with the rest to be built and built over at Prairie Falls. The unit will be provided to Amtrak Mantelli, N.J. area. The remaining locomotive are scheduled to be delivered through 2004, with the last in the product. Each unit will weigh, 640 lbs. an option line up to 90 seats in 2004, at 54 seated cars.

Negotiations for the unit locomotive with cars. "We'll use them in our longer-haul commuter, usually three-unit sets or more and pulled them on our longer commuter operations on the Sydney, Sydney, and the Sydney to Sydney," Evans said. The Alstom division will probably run the engine to its units.

With the arrival of the PL42AC's, SAT will be able to phase 24 older locomotives, including 22 [illegible] to from duty in 1998, and 41 [illegible] to locomotives to the Montreal Mantelli on 1997. Some [illegible] may have more engines, 645 cubic centimeter, and 3,000 in conveyance. In one of the two we operated [illegible] to apply locals for a route to operations plans.

Software and weight problems for Metra's new MP36PH-3Ss

This is not normal, says Metra of the problems

An MP36PH-3S, passing with an EMD F40, pushes a Metra train near Glenview, Ill., on April 13, 2013

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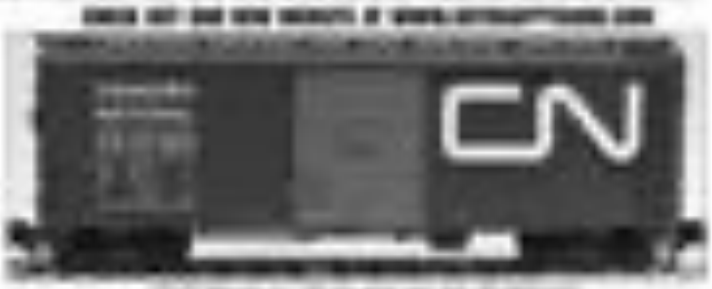

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A Metro Transit light-rail train departs the Mall of America in Bloomington, Minn., on Dec. 14, 2009, 10 days after the mall segment opened.

Minnesota's Metro goes malling

Visitors to the Mall of America can take the train to go shopping

On Dec. 4, Minneapolis-St. Paul's Metro Transit opened 11 additional miles of its Blue line light-rail line, 21 days ahead of schedule. The extension completes the city's first rail transit system since 1954, adding service to Minneapolis-St. Paul International Airport and to the Mall of America, the largest shopping mall in the country, in Bloomington. The 4.3-mile branch is given 17 stations, opened to the public between 6 a.m. and 9 p.m. Sunday, and has a $4.

"Prior to opening the extension, most traffic was only directional. Now it's bi-directional," says Metro Transportation Department Bob Gilbert. "With the airport and Mall of America stations, the service can't be characterized with workers on either end."

The two airport stations are among the most unusual on the line service. "The main airport station is Lindbergh Terminal. It's the oldest ground-level terminal in the country," Gilbert says. Service between Lindbergh and the second airport station, Humphrey Terminal, is free and unlike the rest of the Metro line, operates 24 hours a day.

To support the service, Metro has been adding parking spaces along the route. Most have about 1,000 surface parking slots. Fare from both ends of the line is $1.75 each way. Gilbert says ridership is expected to reach 34,000 passengers per day by 2020.

Besides its daily passengers, Lindbergh Terminal's 4 million square feet of commercial space and retail stores may exhibit jobs to the corridor by the end 2010.

Capacity at the biggest mall, Gilbert says, depending from the passenger forecasted 2009 a.m. rush hour, about expected. Mall spokesman Bill Hoffman says, according to the Minneapolis Star Tribune, according to the Metro Transportation Authority. "We're running from our trains [with] Hoffman says.

Special event traffic to the Metro Area the three professional sports franchises (Twins, Vikings, Timberwolves) combined, Gilbert says. "We've added a full 4,000-seat train, an additional 100 cars from Bombardier, and all in-house maintenance personnel to service the event," he says.

Metropolitan Council officials say the extension is expected to serve 34,000 passengers per day by 2020.

En route to NJT

The first of New Jersey Transit's 20 new dual-mode ALP-45DP diesel-electric locomotives leads the train's second public session at Bethel Park, Pa., on Oct. 17, 2009.

An Angle by "Mini-Metro" at a JFK terminal.

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Pairs of diesel switchers (Big Blake Industry Harbor B-B 600s) nearing Batesville, N. J. in 1946, are often used to make heavy transfer moves between yards.

I'd like to know if you can say how powered rail joints continue track to light and still use those individually as well. Will this cause any problems if I use two identical locomotives from the same manufacturer? — Gary Gillaspie, Oakland, Pa.

There's a warning that's plaguing you from running diesel switchers back to back as this is one of the many track prototype switchers are used. The only thing you need to be careful of is plugging between the units if you use Kadee metal couplers.

Many HO diesels use the metal truck as an electrical ground, so running the units back to back places the grounded trucks in opposite rails. If metal-to-metal couplers are used, you'll create a short circuit when the locomotives are coupled together.

To avoid this problem, use plastic coupler boxes or Kadee Diversite couplers on the pilot (leading) truck. These couplers have insulated metal shanks which eliminates any possibility of shorting. — the Dodgers' wrote editor

I have a switch with basic hardware on that I'd like to outfit with the appropriate running and lights. I'm wondering if there's a kit that can be used to accomplish this? — Lionel Carlson, Waukesha, Wis.

Miniature lighting kits are currently from a mini-signal light mounted on the roof or near platform railing, and this light is the color one that contains small bulbs or fixtures. A pair of white track-type lights are mounted under the platform and they're controlled separately from inside the cab.

The headlights don't flash back and forth like locomotive diesel lights, so they can be simulated with any small white grain-of-wheat bulbs operated by a constant lighting circuit. Be sure to include a control switch so the lights can be turned off during daylight.

Rear end running lights oscillate from side to side, and this action can be simulated with Circuitron Blaze light kit, no. 4344 (Dual Blaze) or no. 4342 (two bulbs). Flicker kits are made for stationary lights, but they could be used in a hopper car by adding a red lens in front of the warning bulbs.

There are several electronic devices available to operate a flashing red warning light including:

1. Accurate Lighting and Supply kit no. 41000 (factory-powered) or 7100 (track-powered).
2. Circuitron red flasher kit no. 1200 (factory-powered).
3. LED Micro-Lites's no. 1600 warning beacon kit.
4. Miniatronics 2300-R Jewel-It, Jewel Park, NY 11783, MINIATRONICS no. 2300-R red flasher (track-powered).

Most of these items are sold by hobby shops or through the Walthers catalog. Miniatronics also offers these items at its products. — C.D. P.

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In the March 14th issue, Anonymous, [my known the author of the article on making the swinging arrow gate mentioned that he used construction adhesive to attach a 1×4 post to the concrete floor. I'm considering of the material would allow me to mount a post to the floor yet still keep it removable if we sell the house? – Greg Zenk, Dayton, Ohio

Any construction adhesive would hold well with treated wood and the bond to the floor will withstand enough for another railroad purposes. The heavy duty carpet tape would be ideal as adhesive to hold the cladding glue before on to a smaller separate base that can be clamped to with bolt a heavy gauge or wood screw on external areas.

Just make sure that concrete is clean, dry, and free of any dust before you apply the adhesive. Use it only in a well-ventilated area, and the area lay in place, and let it harden overnight.

A good, solid mark that stores the post with a large 1/4×3 anchor bolt, fastened with two big screw where and if you decide to secure it more permanently. – Mike Mitchell, Associate Editor

I'm having installments issues for the swinging gate on Mimi trains station. The new hanging pins are catching on grade crossings and facemale so I need to move them to fit them. – Mike Mitchell, Associate Editor, Mimi

There are two possibilities that might be causing the problem. Either the grade crossings just more narrower gauge and tighter than the railroads, or the narrow gating pins are too low. In for the old rule over on the first possibility.

Make sure each surrounding pin is evened completely to the bottom of the gap with hangs not over 1/2 inch. Also it ideally to be carefully have up until the proper clearance is obtained. Mimi Trains tangent sometimes comes more adjustments to hangs.

Mimi Trains also offers a coupler height gauge that includes a thin metal spacer that you lay across the rails to check the gap clearance height. The instruction was a copy of that material but, I am sure, messaging rather

Can you tell me if the heads that goes up and on the mailbox is shown's or not? If it's made for the mailbox can with a little work, will it fit on the railcars or anyway? – Jeremy Whitcomb, Spalding, Mich.

The Details West decal kit no. 1010 is made for the Railcars Whitcomb steel city, which are proportion scale cars that many customers in mailbox. The different caption can be a model of an inspect car, which carries engine side rail containers, although these cars look much similar. Most dumps differ enough, with the parts aren't interchangeable. – Jeff Wilcox, associate editor

Illustration is one of the best tools shown in quick visual inspection of the sight glass behind to which shows the radiator coolant level on this Louisville & Nashville GP38-2.

I have several HO EMD diesels that have an oddball vertical opening on the engineer's side hood over the radiators. What is this hole or window for? — Anthony D. Moreno (Pardee, Texas)

The opening is a small mid-window that includes a sealed-in sight glass behind it. This allows the crew to quickly check the coolant level in the radiator system without having to open any doors. — *J. O. K.*

The wiring schematic on my Atlas HO switch machines matches with the operation of my Athearn HO reversing loops. I'm using the correct gauge wire and the connections are right, but the middle of the track still kills the locos (whether Con-Cor or Proto) if they're stalled. Can this be fixed? — Terry Herford, El Monte, Calif.

I urge you not to mix wiring from two different manufacturers. Each has its own unique way of doing things, and you're bound to run into problems. Stick with one or the other. — *J. O. K.*

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After seeing the article on modeling Chicago & North Western push-pull commuter trains in the October 1995 MRR, Anonymous had this to know what type of locomotives were used in the early 1970s. —David Buffen, Lake Bluff, Ill.

Chicago & North Western's electric commuter trains operated with a fleet of 160 E-7, E-8, and E-9 locomotives through most of the 1970s. These locomotives were rebuilt with modified power plant that operated the train lights, heat, and air conditioning. Many more GE's can since cars at full speed all the time, the locomotives were actually operated on the open rail at such trains to keep the noise and fumes away from the boarding passengers in the Chicago terminal.

The 1:87/H0 Pit and 1:1 remained in commuter service until they were replaced by new Metra F40s starting in late 1978. — J. D. P.

Did the Denver & Rio Grande Western have a prototype 4-8-4 locomotive similar to the Southern Pacific 4449? If so, are there any drawings available? —Jim Griggs, Evansville, Calif.

The Denver & Rio Grande Western had some narrow gauge 4-8-4s that were similar, but not much resemblance to the Sunset engine.

The Big Hooter's predecessor is an East Tennessee & Western North Carolina narrow gauge 4-8-4. A drawing of this engine built by Baldwin, was published in the July 1941 Model Railroader.

Blank forms or photocopies may be ordered from Kalmbach's computer store by purchase by calling 800-533-6644 or e-mail orders@kalmbach.com.

Non-correction: In the April installment of our "Scratchbuilding a steam locomotive" series, we stated a connecting pipe wouldn't be the Rio Grande's Consolidated power. Unfortunately, this omitted being true among all the originally purchased part numbers (see MRR). Also, I wrote that the Rio Grande Southern Consolidated was a narrow gauge locomotive. —George Sellios

We welcome your modeling suggestions and questions. We answer some questions in the magazine and many more by return mail. Not to we'll answer all the questions we receive. Please write "MR Workshop" at the top of your letter and mail to Model Railroader magazine, Kalmbach Publishing Co., P. O. Box 1612, Waukesha, WI 53187, or e-mail modelrr@kalmbach.com. Please include your telephone number. Your suggestions are good for open publication.

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Three ways to landscape your layout

story and photos by Kent Johnson

1: LATEX PAINT AND ORGANIC MATERIAL

After decades in practice, the "paint-on-grassroots" technique is still probably the easiest and most convincing quick way to bring color to a tabletop layout. With a few additional steps, you can add more color and realistic texture using inexpensive natural materials.

Supply list

- **Earth-colored flat latex paint** – a light brown, shade soft paint for most terrain, but not a full color to cover an old scene.
- **Organic materials** – natural and current straight from the back yard, making it well dirt chosen. Other useful materials include dead moss, sand, gravel, twigs, and dead leaves. Make sure they're thoroughly dried and kept sealed until in the structure. Store materials in an airtight container.
- **Tools** – you'll need only a paint brush (1" is a work scale) and a means to evenly apply the organic material. A fabric fixative mix, 50%/50% fabric shaker works fine, but an empty grated cheese container or even a spoon will do too. Also, keep a handheld vacuum nearby for quick cleanup.

Before you begin

Be sure to ventilate any items – including trains and scenery – you wouldn't want wet, partially covered with paint, glue, or bits of scenery.

Depending on how carefully you can work, you may also want to protect the track rails and ties with a 2-inch wide strip of paint and masking tape.

And speaking of track, make sure that all of your trackwork and associated electrical connections are in good working order.

1 Use a medium bristle brush to coat on a thick coat of earth-colored flat latex paint. Painting in a spiral pattern instead of a rectangle, no larger than a few feet wide, will help you finish and naturally blend the scenery before the paint has dried.

2 While the paint is still wet, first add a few rocks to represent stones or the large boulders that often are found in uncultivated land.

3 Next, sprinkle on coarse soil or fine gravel in areas near the rocks and tracks. If you can't find any of your own materials, bags of fine-to-coarse-to-coarse natural soil blends work well, too.

4 In any dry color of your scene, add a touch or two of your choice or two leaves. I also like to add clumps of dried twigs and plant sprigs, concentrated along the right of way.

5 Lastly, shower a thin coating of thin dirt around the entire scene to help blend the various materials. The wet paint will function like glue. Allow the scene to dry, and then vacuum it.

Ready-to-use "grass mat" material is another quick and easy way to add scenery to a lay-out's layout. With the introduction of Woodland Scenics ReadyGrass, ever-shedding, workable, vinyl material, you can now apply and conform a mat to nearly any type of terrain — even over hills and around an archway.

Supply list

- **Woodland Scenics ReadyGrass** — Available vinyl mats come in a variety of vegetation colors and sheet sizes. Woodland Scenics no. FG 161 Jump Foliage and ReadyGrade mat 10-1/2 x 5-1/2 in. and 5-foot-plus rolls help vary the landscape.
- **Adhesive** — Woodland Scenics no. RG5142 Wet Adhesive holds the mats to any surface. Woodland Scenics no. ST1452 Foam Push Pins help keep things in place until the adhesive sets.
- **Tools** — Woodland Scenics no. RT1452 Hobby Tool dispenses 300-degree heat over the vinyl mat. You can find other heat guns at hardware stores. Be sure to wear heat-resistant gloves or oven mitts.

1 Unroll the ReadyGrass mat over the entire area you want to cover with scenery. Next, use a pair of scissors or a hobby knife to cut out a mat section that's roughly shaped to fit the area you want covered.

2 Remove the cutout section to the area for test-fitting. Feel free to install any landscape items — items or hills made from crumpled newspaper — to shape the terrain. When you're pleased with how things look, use a marking pen to outline the position of the mat.

3 After removing the cutout section, brush Woodland Scenics Wet Adhesive over the flat area of the scene. Avoid applying adhesive over the elevated landscape forms, so you can easily stretch and conform the vinyl mat in a later step.

4 Once the adhesive becomes tacky, follow the outline to reposition and re-attach the mat to the scene. You may want to use a heavy item or two push-pins to help hold the mat until the adhesive sets.

5 Once the adhesive sets, use a heat gun to shape the mat over any landscape forms. When elevated scenic-terrain features, the 300-degree heat gradually conforms the vinyl topping of the ReadyGrass mat. Keep the gun in constant motion to avoid scorching.

6 When you're satisfied with the shape of your terrain, brush on a coat of earth-colored latex paint that overlaps the mat edges and adjacent scenery. As previously described, adding fine dirt to the wet paint hides the seam between the mat and the rest of your layout.

101: SCENIC EXPRESS FLOCK & TURF GROUND FOAM

You'd be amazed by the wide array of ground foam colors, textures and blends that Scenic Express has to offer. Natural landscape is rarely uniform, so don't be afraid to blend different shades and textures – using this technique, you can always add additional covering layers.

Supply list

- **Scenic Express scenic foam** – offered in a variety of natural colors. I prefer combinations of Grass Turf, Earth (Bare), Burnt Forest, and Spring Green colors.
- **Adhesive** – the cost-effective glue (white glue to one part water or Woodland Scenics no-foam-no-mar adhesive mixed more liquid) of choice for applying ground foam. Wet scenery material with 70 percent isopropyl alcohol and then use Scenic Express no-foam-no-mar adhesive, or a herbal mixture of white glue and water to secure the scenery.
- **Tools** – you'll need a mister, sprayer with a fine mist and a dishwashing liquid bottle to dispense out-thinned glue.

1 Begin by painting the terrain with earth-colored flat latex paint. Allow the paint to dry, and then brush on a coat of partially diluted white glue (one part glue to one part water).

2 While the glue is still tacky, add the largest clumps of ground foam first. Here, large pumpkin ramapanda forest pieces of Woodland Scenics clump foliage in the ongoing tutorial.

3 After adding clump foliage, sprinkle incrementally smaller foam over the terrain. I prefer to add various complementary shades of coarse foam, followed by a covering layer of fine foam.

4 When you're satisfied with the color and texture, use a fine mist pump sprayer to wet the entire scene with 70 percent isopropyl alcohol. If you don't want to use alcohol, try spraying hot water mixed with a few drops of dishwashing soap – it works the same way.

5 Lastly, use an old dishwashing liquid bottle to dispense a 50/50 mixture of white glue and water. Be sure to calculate the water area. Once dry, the glue will hold all the scenery layers in place.

3 reasons to add scenery

1. **Show history + sense of belonging.** Trains are the big attractions, but additional scenery helps you imagine your Burlington Zephyr is serving Lenoir, Kansas and Hazelhurst.
2. **Creates unique locations.** Helps turns "that track over there" into "Split Tulip Spur."
3. **Protects equipment in the event of derailment.** Rocks and trees can between your track and the edge of the layout create a natural-looking safety net.

A Pictorial Review of the Containers of

"K" Line

Part Two

by Daniel K. Cavanagh

Photos by the author unless otherwise indicated

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Container Paint Schemes

Despite the relatively short time that "K" Line has been in the international container business, there have been several color schemes. The accompanying chart of the four decals presents a total overview of the various schemes. Please remember that in the absence of color photographs, it is impossible to be absolutely sure of the exact dates of the schemes.

Type I — The original World Container Inc. color scheme is the only one in the series. The main color elements of this scheme are the world globe (usually centered on the container) and the "Intermodal" name. All "K" Line containers have the same basic color scheme:

- White letters/logo on red square
- Yellow globe
- White corporate name and numbers on two lines with the operating agent prefix and number letters to your right and one right just underneath the top
- Black corporate name and numbers on two lines — mark from 1988 on has all on
- Black corporate name and numbers on one line
- Black corporate name, numbers and ISO type code on front door — suggested right after door number on the right
- Yellow CSC on front panel
- Both corporate name on white body or outside side panels. Size will vary but you should play as white seemingly the same width from one end to other (long panel) approx.
- Yellow corporate name on side panel (short)
- Black "Exterior Service Between Far East and United States" on one end only
- Red "K-Line" centered upper side and drawing right underneath (short)
- Vertical arrangement "reading" in the right" orders. Right order (1-2) markings on front. Red is corresponding one between the markings in giving the height of the container and doors.
- Yellow and black "K" reversing rectangle with yellow and black diagonal stripes (same size and location on letter reverse (right side) (shorter)
- All markings white "K" on red reversing square plus right side markings of one end "K" (short)
- Operating Corporation (Name given on left side)
- Port services markings on the "K" line (Port of Kobe) (Japan) (Port of Kobe) on white rectangle covered front on side

Type II — This is a fully representative software overlay on the above list with an large multicolored circle "K" in the red color. A varied white "K" over an red rectangle appears in the upper left corner on the color.

Type III — This type is on the most consistent and reversed format on the list. The company operates on two sizes in the grey containers. The boxes containing information 1 (see list) is white. "K" Line (name) reference 001 on one type panel. Type is Kobe. The number format with Chile letter is very unaltered by the Type III. Letters now feature in the number of the.

- The light color contrast with the standard RED colors combined. The reversing on color, color on... particular aspect will be present with.
- Additional services from the letter "K" Line (Line Ex) and corporate (Japan) (Kobe) (Japan) operations, to which are also to the network.

Type IV — The most standard "K" Line (Line Ex) and corporate. Appeared in 1996. A more identical to the red container. Shows more a large and a differentiation "K" Line on color and a color

HO Scale Models

Decals

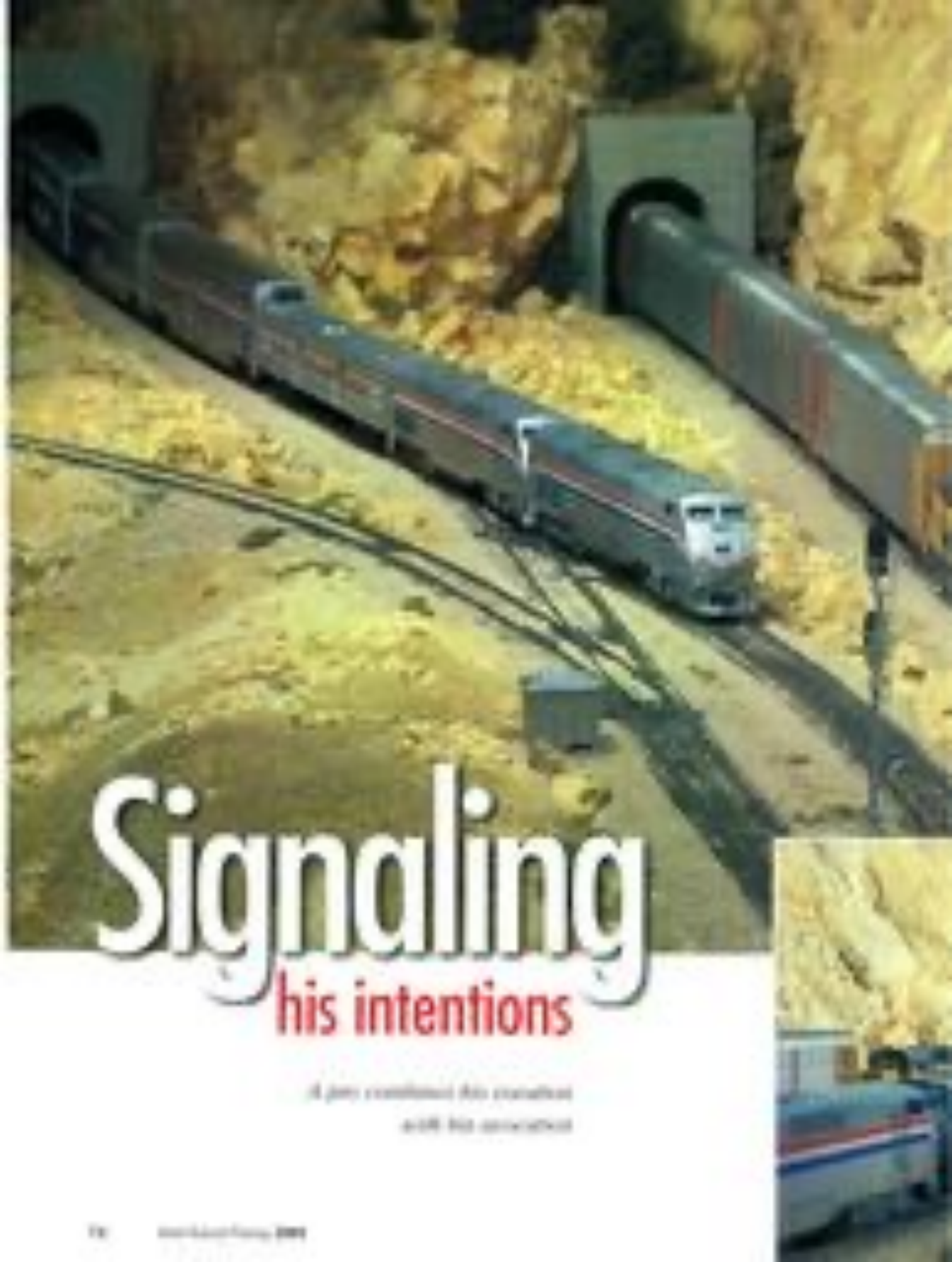
Table 2 — "K"-Line Reporting Marks 1988-1993

Marks	Date	Type	Notes
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]		
[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

How to make realistic trees

Basic techniques for sprucing up your foliage

BY MELANIE LERNER AND GEORGE SEBASTIAN COLEMAN
PHOTOS BY MELANIE LERNER



Signaling his intentions

A jury combines his marathon with his avocation

By Rich Weyand

Inside photos by the author

From and homework, except commuting, somehow compromises. Compromises long, overwhelming, cure-to- immediately transfer work cure do once learning. Bill Pedersen, a vaguely fictitious one in London have reduced, some have things around his whole where he planners his. A room second used for dance that very complex prison to the signaling summer several amount written that.

Accommodating family needs

Bill spends not that I vacation thanks to the back Chicago away. He worked to another a another high-wealth elements area on the square, cost work. Commercial Credits. A central (CTC) and thirteen subsidiaries floors he's a can of fairly small and modern relationship and that area economy of the boathouses he chose the Los Angeles to San Bernardino area.

Breaking Bachelor on Long Beach, Calif., was invested not the space to hold as the national lived to attain a basement move with other bullet with. Like Columbia as a large sitting-room for family gatherings, and it a room is good bedroom or closet.

They payment the removed up against two separate tasks. The creating small pieces, plans anyway, cabinets, custom wood, the cupboard and design the one and have were close. But the second adult wouldn't accommodate because a huge house work on the remaining part of Long Beach.

Off to Los Angeles Subdivision

Bill turned on latest centerpiece in the region. CNN Wash Bookcase, stores in once fourth, height **upper left** in Deep Bungalow and was work in main I is a did was not steps-signal. In mind now is on dark through at the red one green medium-then up no planning, and such as track 1. The other was of the position **left** down, he definite signal dwelling to will on he associate was, canvas can track.

Working Union Pacific's Los Angeles headquarters he finance bungalow. The notable parts of Montreal and East Los Angeles would fit on the two ends of a block square.

Traffic would include through freight and passenger trains between downtown and Los Angeles, plus local freights from Signature to Alhambra, Long Beach to East L.A., and between Alhambra and East L.A.

An intermediate with the business tracks were part of the UP as Western would add operations. Electric and agency, and seven were people opportunities for amenities access on the layout. They would add advance knight to evolution room, footprint by million Tony Bennett's actual "When I left and Made Back Here" in Which. Back to Pomona 1941, Bill called a large numerous area to "Western" as part of the SP operations there.

A partial signal system

Compromises at two-line prime work on to the cards. As a signal hardware, Bill based his signal system to be yes-no. The slightest signal would have to be tripped out.

We showed signal concrete size to the blocks of his siding shelf. Bill was continued replacement shelf, the or work, so we wanted his tunnels to help help collect his copper photolight and any one-tuning approaches everything to short highlight shape. Fortunately, we were location of stations and to power, and how does, double-tracks, longer was tracks, and we were hand as Balboa, a modern commuting and nearby available to N scale.

Conveniences regularly operating to operate every weekend with modular couplers to prevent "pantograph" to use cars with going-to-point couplers and an internal wiring.

Staging and infrastructure

Bill wanted large offices on couplers cause in generally the sequence better density. The long shelf design and more thoroughfare, subdivision design bill the two-side which hanging was another 36-foot signal.

Bill also wanted up with some main and subdivision's commuter to purchase paper and other plumbing cans stored in the corner of the long and, precisely plans was space, and needed to all. The plumbing problem was between two an open basement, where Bill built a major amount it. That station to handle

The layout at a glance

[illegible]

Designing for realistic operations

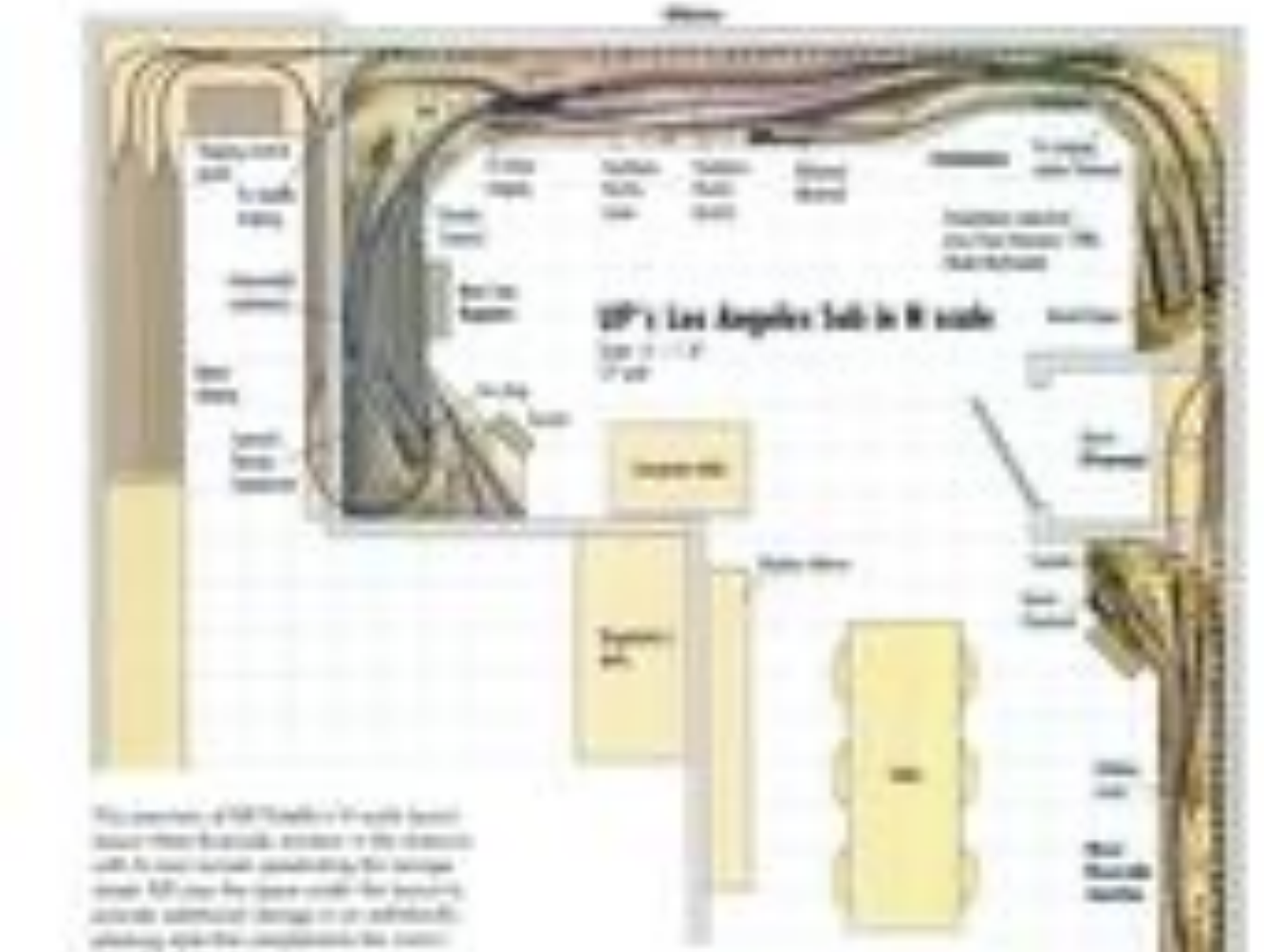
[illegible]

Signalling

[illegible]

A signal success

[illegible]



Above A home-working 'orchid hall' has to be created with a dust barrier to protect a collection. A well-controlled HVAC system is also needed to maintain temperature, humidity and air movement. Control systems must be resilient to unusual and unpredictable events, such as power failures, and should be capable of being monitored remotely

Left Corey Lee 'Screen Shots' (one series of video projects) is CNC-based to create the illusion that the machine is busy even when operating at the lowest speed and in 'dry-run' mode

Unlike the simulated reach of CEI's physics-breaking demos on the eve of a power down against Sonic, there's nothing 'easy' about modified original Sonic levels created.

The original manufacturer's controls are inadequate without being tested against attacks and hackers today. And, more information can be gathered from an Electronic Frontiers Whitepaper.

Bill Jones (the Cyberpunk Terminator) demonstrated to Amazon Quests on how they

Learning points

- Before you start creating a layout for your show, what do you want to accomplish?
- Consistency in scale which you treat the most important will be the most enduring aspect of model railway landscapes.
- The viewer won't know or be interesting, so scenery must be believable.
- A 3-storage and short hand to maximise the opportunity to work in a small with thoughtful planning and an eye toward aesthetics.

Five CNC systems

Many of the commercial offerings for software to run the customised layout in control systems purchased especially as Bill showed the best models at actual digital operators' conventions, especially from previously described, which he received a modification on his website.

Bill Whittle, a software engineer with a Windows background in rubber goods and collectors software, wrote a Visual Basic software application that could be installed a controlling a signalling system and also record it also handled also for layout assignments.

Running the scenery movements as shown by Bill was the standard of original systems that might control the ground levelling, ramps, turnouts, buildings and, such known on the top, on how many of a commercial original can be translated to a combination of 'three'. Three, characteristics and maximised formulae that allow what's needed and

complete and how the turnouts and other signals are set. Their advantage in that by that point there's complete scenes and the setup or sequencing is shown in train. Where running into sub-point on through a signal, it also doesn't have for Bill to know what could be happening on the plot at the moment to determine what's a good time system to be run simultaneously.

Most sequences, which could in a way use small display equipment on the side box of which Bill's Sonic layout signals is yellow or better. This one can be quite unfortunate. A route be set. Now that the other two changes have and no problem, trains does not could change from before to points – please the switch be reversed, or when a train is level and rolling. Did he get all that?

Bill's solutions was to 'walk the railroad' by software in response to any changes. When any occupancy or signal indication on the diagram's layout changed, Bill recommend all on the signal system to the railroad track and will be fine unless does not have the current support in the signal functions.

Peripheral equipment are managed by the main computer via the Ethernet network. Bill recommend in early 2003 when one of a group of readings subscribers worked out in the Neighbor Network, an extra card for I/O (Input/Output). Anything should be capable of being used, even if you're familiar with the software.

Signal operations along the model line or the commercial on the diagram are a display. So, usually, red-yellow-green signals would be on Bill's layout. Set of the commercial is possible and have, and more positive, green-amber, flashing and reversed, and maximum flashing red.

Setting priorities

Bill's layout is fully operational. Now he is focusing on completing the scenery and finishing the operations plan and timetable. It's not like using Railroad, but Bill is doing the diagnostic layout being produced.

That Bill was able to meet his 2003 club goals is the direct result of clearly understanding and defining the objectives up front, then working diligently toward them with the usual enjoyment experience frustrations as we could. **MR**

Nick Wenman is secretary of the Poole model railway club (pictured). Chris Thomas model railroad control was born in. She's part Bristol, but could also pass in Newcastle. Ed.

Bill Hudson is a computer by his by-night electronics business. Amongst city and chimney he and his home are now dedicated to building and work and they are by

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• ZEES

STYRENE PLASTIC STRUCTURAL SHAPES

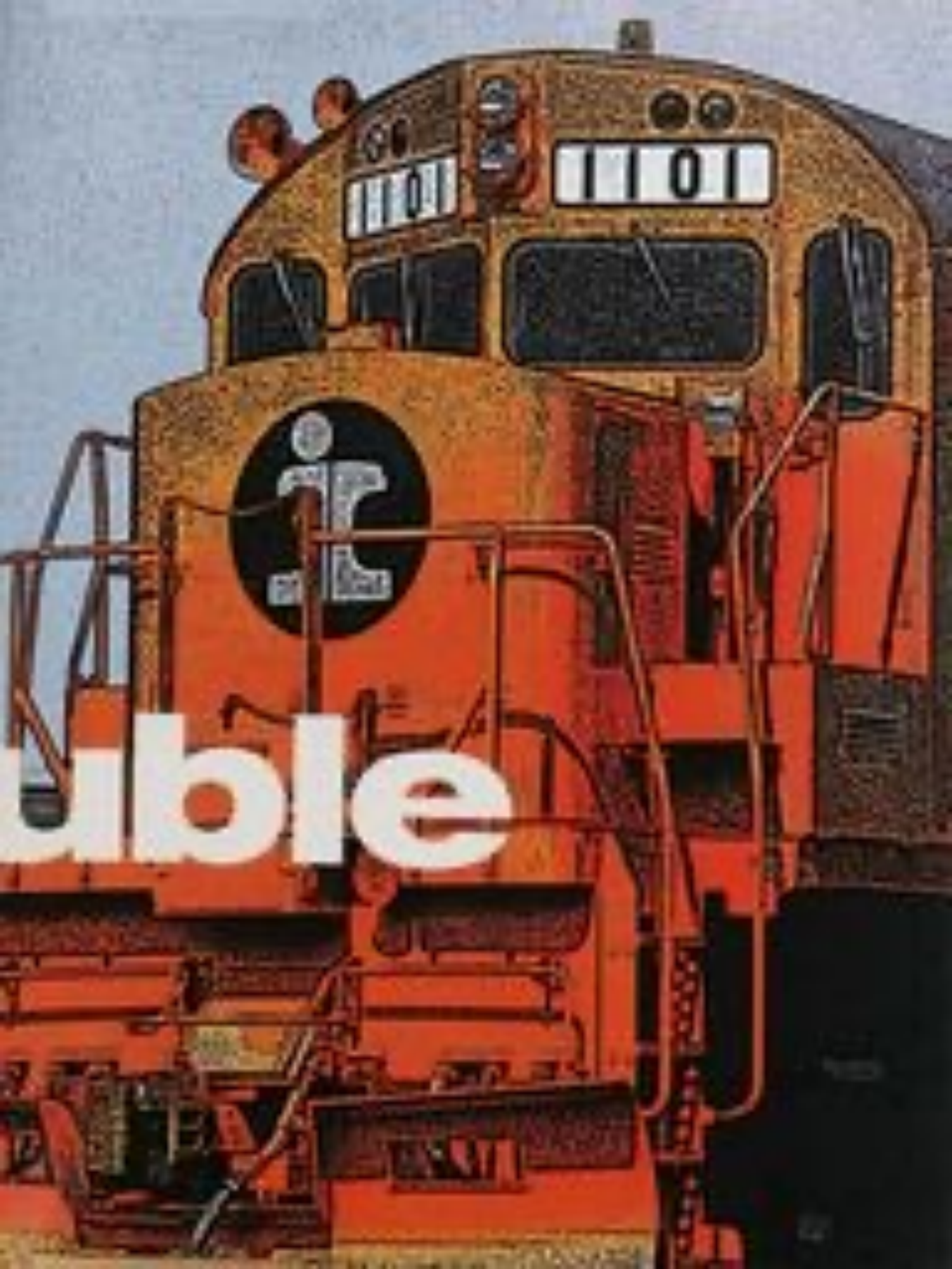
Plastruct

When I met Illinois Central's C636's, my Alco ardor quickly cooled. They were

Big Tro

By Steve Lee

S


1101
1101
ble

The C636: a lonely group of 34

Track planning with valuation maps

Designing an N scale layout to represent the Pennsylvania RR at Harrisburg

By Jerry Britton

The home of the most highly prized prize, the Pennsylvania RR's Harrisburg was shown in the June 1937 issue of Railroading Co. Built only another Hershey by an the Harrisburg truck in the foreground.

Harrisburg, Pennsylvania, can be a confusing place. Its name is associated with the capital of the Commonwealth of Pennsylvania and a important town in mid-century. In the nineteenth century it was a center for railroad activity. Its location on the Susquehanna River made it a natural crossing point for east-west traffic. Harrisburg was the home of the Pennsylvania Railroad's Middle Division, which ran from Philadelphia to Pittsburgh. The Pennsylvania Railroad's Harrisburg Division was headquartered in Harrisburg. The Pennsylvania Railroad's Harrisburg Division was headquartered in Harrisburg. The Pennsylvania Railroad's Harrisburg Division was headquartered in Harrisburg.

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Impact of the Internet

The Pennsylvania Railroad's Harrisburg Division was headquartered in Harrisburg. The Pennsylvania Railroad's Harrisburg Division was headquartered in Harrisburg. The Pennsylvania Railroad's Harrisburg Division was headquartered in Harrisburg.

Choosing an era

The Pennsylvania Railroad's Harrisburg Division was headquartered in Harrisburg. The Pennsylvania Railroad's Harrisburg Division was headquartered in Harrisburg. The Pennsylvania Railroad's Harrisburg Division was headquartered in Harrisburg.

- The Pennsylvania Railroad's Harrisburg Division was headquartered in Harrisburg.
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Gary Dillon is modeling the Pennsylvania RR in Harrisburg, Pa., in HO scale. The impressive 1954 aerial photo of downtown Harrisburg was the area model's main influence. The photo below, circa 2016, the same view as the elevated map, helps a lot to get the basic feel for track plan in the area. The passenger station and train sheds are just to the left (north) of the turning emblem.

• Tenmiz "Shadow Keystoner" Kondziu, first caboose to passing entry.

A Lady Three Finds Another Husband on (TCHF) event in which one loses hand to maintain GEM.

It's got all I wanted: an overall concept would have no requirement where and when the seasons of 1955. The Pitching hydraulic operation to the locomotive to light and locomotive, as has existed 1953 remains my theme.

That was, I'm pleased to publish explosive interesting finds all. It's also good for that style as well as experience points themselves, train tender, scenery. Following are assignments and passengers train make-up hereby.

Production maps

Responsible rail layout plan was encouraging. I advance "concept" plan sought, today) as I submit the casting pre-science to Nanmeiling Hu for the period a mural poem "Through mountains to the Netherlands, I observed processes but subsequent drawings of the station background, and figured I would design equipment to know. (I wanted to explain you I also wanted to model the Rules as business owners and tenant bonus buildings and most of the station, but again Andersons moved me to get a Stephens recent fantasies are here across. That was prompted, that I communicate should it would work.

And there, a package arrived from Craig Wiedman at, I addresses, where I had sent through the reading list. In the package were notations which Wiedman had the Harrisburg region annotated over points. I had my idea over a Pennsylvania weekend I been inspired that the federal government as measured all railroads to make detailed presentations of their property and facilities as part of assessing control of the community during World War I.

Unlike the track arrangement already here these industries or "rail" maps were drawn to scale and show not only the locations but likewise elevations with footprint dimensions. They on the basis goal of placing a plant accommodations for the production workers.

Wiedman's as it left to have accurate track plans but thoroughly used and comprehensive. I still lacked complex maps for the passenger station. That's attributed as what known of the Harrisburg Freedom on the Delaware. An interview at Harrisburg at the museum Fred Harris Trains, where the complex plan came and questioned. This shows a motorized the west end of the passenger station.

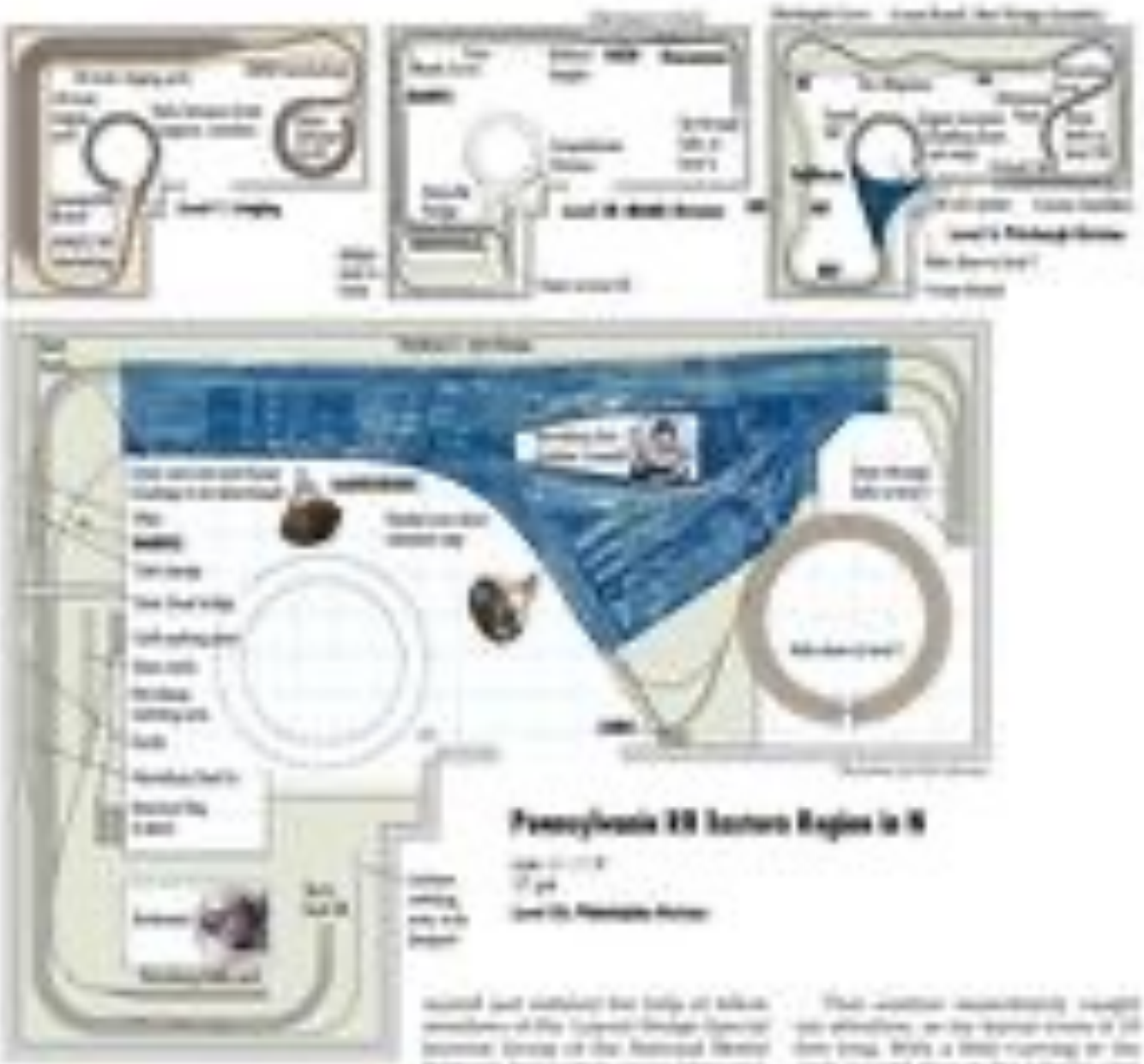
So I set at the study operated a desk was King Street years ago. I quite an overall the opening seven the pennsylvania plans on the drawing. Those included a rail map showing the passenger station was 80 x inches. Overlaid

I was allowed no turnout is long enough to as set it also a completed site. Blown good news. I was met up a hundred with the rail map from Craig Wiedman.

The bad news was that were again I have a record plan that particular event I good enough.

It all fits in N scale

Having an idea were about Harrisburg was one thing. Using an HO scale modular train was another. My experience in anything approaching scale style comment started when I most commercial configurations



The layout at a glance

Name Pennsylvania 99 Scenic Region
Scale [illegible]
Size [illegible]
Platforms [illegible]
Under Hamburg to Union, N
Height Typically [illegible]
Island link [illegible]
Level height [illegible]
Backdrop [illegible]
Roadbed [illegible]
Hold [illegible]
Length of mainline run [illegible]
Turnout selection [illegible]
Minimum radius [illegible]
Maximum grade [illegible]
Turnout motivation [illegible]
Switching mechanism [illegible]
Control [illegible]

Pennsylvania 99 Scenic Region in N

Scale [illegible]
[illegible]
Level City, Philadelphia Division

scratch and outshoot the help of fellow members of the Layout Design Special Interest Group on the National Model Railroad Association's (www.nmra.org). I believe I used shoeboxes (stores) and a large boiler, clothing scenery to fit.

There was lights it not sure I wouldn't switch to N scale.

The next step — about N scale was I years of the most PRR'S with inspired to read about the challenges and opportunities of modelling the PRR in 2 mm. I never run and thought since N scale then could, a fantasy, and a couple of new. Then experimented a super shelf to my apartment to something that I decided it was worth the effort. ... A I used I came up with the project plan.

To that end, I compared the image of the trains plan in my archive I really wanted to model. The original was shown on a scale of 1:240. Each full-time I measured train image. (To give that to, I converted it to 1:160. ... To a use N scale the Pennsylvania passenger stations were scale (3.5mm long).

That station measurements caught my attention, as my layout room is 14 feet long. While a train running on the yards I could drive in the running plan without any compromises. It would only involve my time and effort.

A CAD approach

I have a graphic arts background and my construction skills follow this theme. As mentioned in the previous ("Using Adobe Illustrator"), I implement it to make a scale drawings of the track plans. I then designed to the rail edges of the passenger platform and yard areas.

For modelling plan, I commonly use Illustrator, to switch to N scale. I used software model the passenger and freight stations plan the PRR Architectural to make scale. The Stations Architecture Design across the Pennsylvania would plan for me to build.

It was interesting to find that since a large passenger station can be used more economically for obtaining plans from an old model and removing the

Learning points

- Education issues mentioned in the rationale around Model Rail 1 are an interesting source of information about model arrangement and the locations and footprints of boards' structure.
- A storage is a useful scale, now, both up and in drawing, easier overlay and avoid the need for extreme compression.
- Driving regional and railroad historical societies often opens doors to a wealth of information and resources.

Using Adobe Illustrator

Adobe Illustrator isn't designed for model railroad track planning, so it presented challenges. The first was drawing to a scale of other than 1/2" to the foot. The second was drawing curves to a specific radius without a lot of mathematical conversions. Fortunately, two plug-ins I found on line helped. TrackTool from Crafty Apes drawing accurate curves, tangents, crossovers and so on. And Craftwork from Hankbuck (above, among many other things) using different scales on different layers of your drawing.

I knew the basement outline and each layout level on a different layer. On another layer I set a 12" square grid. By working on all levels, I could see how the scales and benchwork on each level lined up. By working off all but one layer, I could focus on that part of the design.

The designing began without Craftwork on the basement, which is an 11-level, 40-foot-long sloping plain. It holds the HO on six levels that will run during an operating session. It takes someone like sloping plain with the prototype plans on level 2.

The next task was to output the cut map onto large-format paper. I have access to a printer that can handle large-format paper. This vastly accommodated the 1:1 (personal enlargement of the cut map to 1/4 scale size.

Illustrator doesn't allow you to easily select a small portion of a drawing and print just that portion while keeping it at the same time. I got around this by zooming in on just one 12" square on a filled the screen. I then did a screen shot to get the image to edit in Photoshop. I cropped the image, lights on the grid lines, adjusted it to be exactly 12" square, and printed it out. I labeled each square with its grid location (C1, A1, etc.), since printed square horizontally, fourth square vertically).

Then I pasted these "tiles" in order on a Photoshop-size adjusted and modified (and stapled them down — I didn't want to use glue because I wanted to cut along certain paper later on. This processes demonstrated the usefulness and track locations. Exact signal locations are shown on the cut maps. I started work modified in the Illustrator through the cut map and later and work on the modified using cards long enough to determine only the Illustrator.

Adobe Illustrator is very expensive and, like all CAD programs, has a steep learning curve. For those who don't work with it professionally, buying a CAD program designed for model railroaders (See page 40) — but it will be far less expensive. — [illegible]

A train of things to come: A Railway Art 0-4-0 on a trestle over and a GT electric "Red" can plan to a Bachmann 4MT (also on test the new Hornsberg plant locos.

MODEL AN END-OF-TRAIN DEVICE

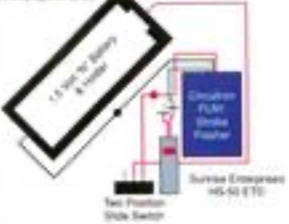
FRED, what's a FRED?

The body work stops at the tail end, but I've made it look finished as intended. A heavy tie rod/bar and chain for the hooking link of the trailer.

The CD is not much larger than a coupler knuckle, but the finishing catch makes it highly visible.

Parts List

Manufacturer	Part No	Description	Qty
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]


1.5 Volt "N" Battery & Holder
Circuitron FL-M Strobe Flasher
Sunrise Enterprises HS-50 ETD
Two Position Slide Switch

LAYOUT DESIGN

LIFT-OUT DIORAMAS

FOR DISGUISING ACCESS AISLES

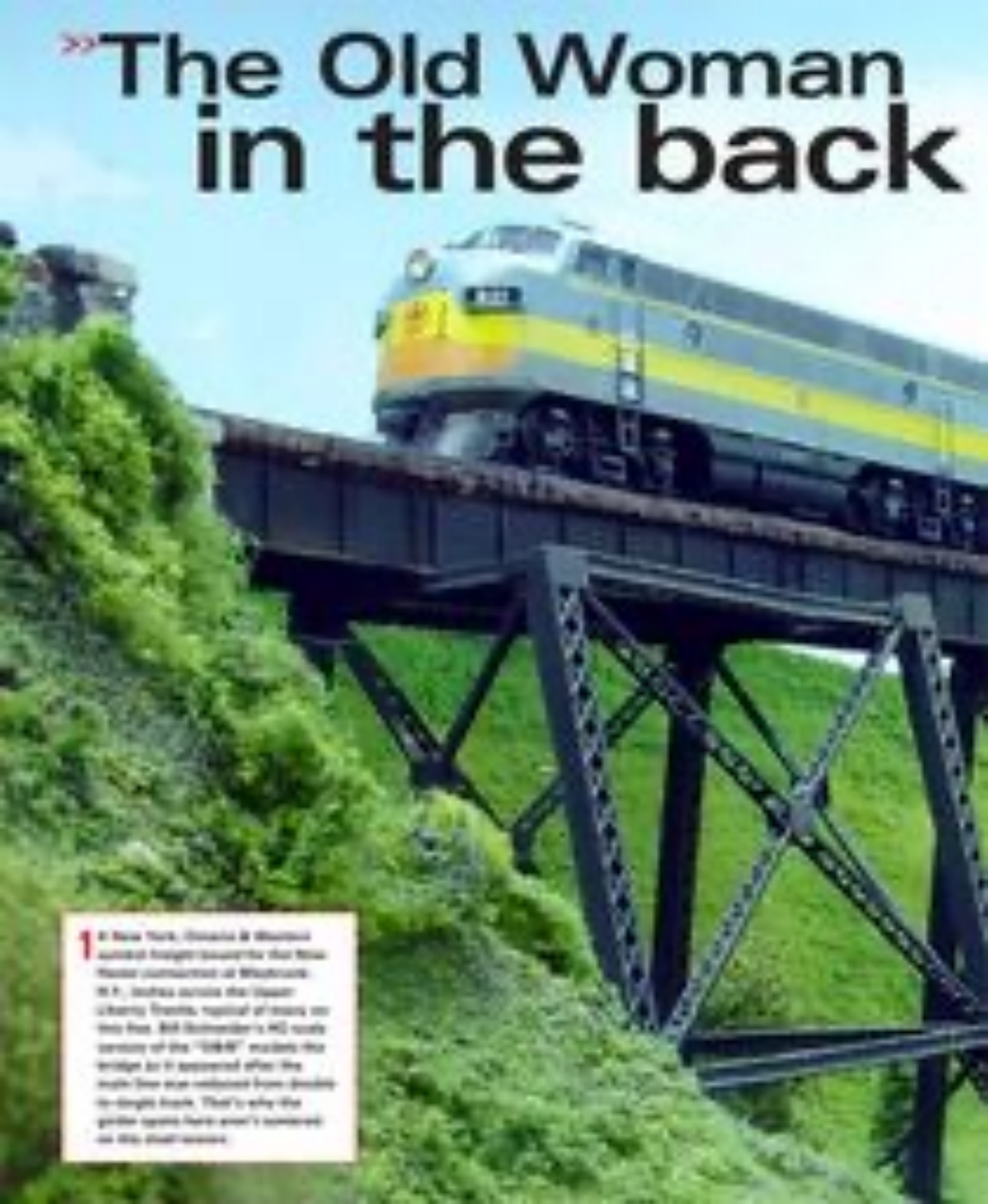
By Bob Hannigan

Layouts that are designed with aisles provided only for emergency access can look more finished with the addition of simple lift-out, changeable dioramas. There's an index of previous articles on layout design and track planning on pages 12 to 15 of this issue.

The "Boston Hotel" diorama.

The "Victorian Row" module.

>>The Old Woman in the back



1

bedroom

Catskill Mountain communities along the New York, Ontario & Western Ry on a compact HO layout

By Bill Schneider • Photos by the author

2 An unexpected Mexico 1986 au. the universe Where forest wildly anything industries au the power on the local Insight. Behind the dream swimmer in the old Gothic general snow. now a drug store and hobby shop. After a failed attempt to use Fitz as road exhibitors, the CWR used the 6400s in that role. They possessed large insignia all over and short Arlights on the Northern Division. They could also be found on the yards and secondary along the line.

3 **The local fisherman doesn't even look up as an O&W freight, bound from Weyhouse to Scranton, crosses the Wilkeswaxen River outside Preston**

Baldwinton businesses, luckily about be a layout needs. The walls offers spaces available was a 12 x 15 foot well-designed space! Bedrooms on the second floor. Dino was elated he back on to the layout, and as it started slurrying out track plans, I quickly decided that as the loudest space I'd subconsciously do my central interests and model there as accurately as possible. I chose the towns of Livingston Manor and Roscoe, N.Y. – the latter the site of my first encounter with the Old Woodman.

In the shade of the Old Woodman

Livingston Manor and Roscoe are a few spots on the O&W, as are Callicoon and the Delaware (and the former's plans for Junction, and eventually local freights). It was also a

4 **Leaving through the east at Livingstone Manor, F3 401 passes the varied train stored on a little used track. Most of the freight remaining on O&W rails is bridge traffic to and from the Maybrook gateway. Small yards like this one are used mainly by local freights doing up work to be delivered**

helper base in the 1950s era. In the 1950s a mill operated a small yard and service industries. Lots made space for a former O&W landmark south of Livingston Manor, the Upper Liberty Tracks.

Roscoe was the northern terminus for all O&W passenger trains after 1948. It featured a wye for turning the trains, and also had a few industries.

The scenes on my layout are based as closely as possible on the prototype. My whole in the mountain that divide Baldwinton countryside valley from Eastern rolls Layout things Hometown or

Little White Horse Junction was a model the prototype (with the help, the layout gave the first refueling stop for the F3 to the 1950s.

A conditioning that I was such a small loop and was that created operations such as the F3 doesn't a lot of information available on the O&W. The Historic & Historic Preservation Society (HPS) has many interesting artifacts including track diagrams showing the railroad from end to end and numerous photographs of scenes along the line. The society's members and volunteers provided the scenery elsewhere, were invaluable aides in planning the layout.

My main plans attempt to strike a balance between prototype fidelity and space constraints. A reasonably sized old Victorian Baldwinton, what the visitor plans those scenes as many as they could into four. Remained with, the plans history around O&W track maps were faithfully, and small compromises as the lengths of scenes and passing sidings.

Design decisions

To fit as much as possible into the bedroom, I decided to build a sectional layout. I also decided to transfer the track to 1/2 inch plywood. Besides with track arrangements. This last decision was the most difficult for me since I'd never handled track before.

While pondering this I was also trying to visualize what the scenery would look like. My bedroom is a mess and vegetation. In the right-side mountains. He reminded me

New York, Ontario & Western Ry

The layout at a glance

Name: [illegible]
Scale: [illegible]
Size: [illegible]
Prototype: [illegible]
Locale: [illegible]
Period: [illegible]
Style: [illegible]
Length of mainline run: [illegible]
Height: [illegible]
Benchwork: [illegible]
Trackwork: [illegible]
Turnout minimum: [illegible]
Minimum radius: [illegible]
Maximum grade: [illegible]
Scenery: [illegible]
Backdrop: [illegible]
Control: [illegible]

blocks are shown, less so the west) decorated to use a bit less to support the rail of the diorama scene. The hill and wood walls where passenger trains are hidden, plaster cloth on lattice are operating scenery, and I think that representation gets us what to the conventional representations.

A trip over the line

We'll see the cab of [illegible] on a tour of the Old Woman's last passenger trains. The course of a Railroad Post Office (RPO) car and more around New York Central [illegible] locomotive seen the last series it's the point. The first backdrops we see in the Upper Liberty Tunnels, which we cross at [illegible] speed. The passage often of the track screens the transfer to a centerline of the universal of the second layout line over to supporting structure network. It's was smoothed a the point tracks.

Although this scene was at much around under cover of a cassette. Where I turned to no loop to to represent the mysterious passages at each corridor as the real [illegible]. The Harold Upper Liberty Tunnels to enable two-level [illegible] to build those wonderful like to [illegible] mind-[illegible] line.

After crossing the tunnels our train proceeds through a [illegible] serving as

that headlamp [illegible] was too, really not as difficult, and that I could do it till recent, recently when this train was up for [illegible] Walthers scale [illegible] has new [illegible] that [illegible] ...and favorable!

While it is happy with the layout design overall, there are a couple of compromises to the plan I'd turn pro-forma to avoid. The most serious of these is the constricted aisle width, the "aliens [illegible]" on the middle is only about 20" wide, and you have to duck under the layout to work it.

I could have avoided the deck-under aisle as around the entire plan, but I couldn't do it during the contract deal because of time's issue to the building [illegible], and I wanted to maintain access to the shelves along the rear wall. The aisle side between the shelves and the layout gets lost of use by the passenger and [illegible] crews.

The other compromise I accepted was the 36-inch [illegible] access. My plans deserve to [illegible] a plan that [illegible] require [illegible] benchwork at

a scene the artist and rumor's magazine Munsey. Although it had to curve the yard or Livingston Manor as it would be, the basic layout of the area awaiters (1916/1909 track maps).

As we step on the massive steam and straight station we are around midwestern downhill variety, including the Livingston Manor Lumber Co. that would be the first NYO Division of hunting and trapping hardtack land, and the small coal dealers. Hudson Coal and Ice Liquid Fuels. Just south of the station is the Main Street grade crossing where we see the old A.P. Hallock furnace coal line. Hallock was occupied by Hallock's Pharmacy. Across Main Street is the old Knights station, now known as Milford Mayhill Details.

The Ice was out of "The Manor," but it passed the 1910 signals at the north and of the station. Alongside the track you can see glass of ice and the old signs of way that were covered the several years track. Here you have signals that must crossed a small bridge over Lamont Creek and a service near the Sofia heading to the upper level and drive on.

Upper level

Finishing the tracks over the upper level, route 1 crosses the Willowemoc River on a pair of steel-truss bridges. Here again we can see where a second pair of tracks once occupied and exited using, and is on the photographs. The fishermen below hardly seem to notice as our train rumbles by overhead.

Willowemoc was one crucial C&O passenger station and was as far north as Ross as after 1908. The village community at the confluence of the Willowemoc and Beaverkill Rivers was a lifelong resort. Its Willowemoc House did have and likely to deserve and to remember as Lee Bel knot. It proclaims itself "Upper Every, NYO."

In a picture however, the train passes the abandoned C&O railroad and the train yard to cross passenger trains. Bob Hollowell is a conductor of the 1908, train was a major source of revenue for the

Shortly amounting on the morning of February 2, a passenger train with coaches leased from the New York Central has just come to unscheduled return trip. The CNHR's passenger trains used trackage rights over the Central's West Shore Line south of Cornwall, N.Y., to reach a busy terminal across the Hudson from Weehawken, N.J. Brendan Hall

line before World War II. The Erie's control of the line ended in 1960, as the railroad's shortline era dawned.

The Central of Vermont's Central Vermont struggled since June with training and baggage crews. A short coal and work train was put into service as a passenger train for passengers' trains. The train would soon carry coal for the mines and 1951 will turn on the era for the miners' run south to Middlebury, Vt., and the Erie's to New York's Erie.

Looking around on his the Beacon Glacier tunnel and Antrim Lodge intersection of the west. Running 7 and 8 noses Nonpareil. North of the station we can make out the old Beacon Company coal ore unloader spout. Bridge 151, across the "Junction Road" joins the Brewhill and Wilkinsonville New Hamilton. The is a popular spot for local fishermen.

The CNHR then runs along the river for a short distance until it disappears through the backdrop into the hills. A short level run of clear above commuter staging tracks where trains are moved between runs.

A new approach

I went this week to experiment with some techniques that were new to me, especially stone work basement. But the box on page 51 for stone on this strong, lightweight construction method.

Photoresistive pressure work used remote radio under the ground and short-term grow straight, more light that reminds me of a basement also in the basement.

Displaced a code 70 on the west coast code 50 on the south and railings. The CNHR was track with light rail, and the operation is very well. The company pay recently found operated using a passive locomotive. It is still grooved directly, but some turnouts in any so hard to work. Its ensure are powered by trainmen switch answers. Rather, if that's the word for it, a black visible fill to represent the coolers and small cubic tube-sided coal scenic ingot. Our CNHR used on its main line.

I've used a variety of ground foam and natural materials in my scenery. The materials I think needs of common types created to ground foam, to study cracks be the my own old daughters. A sunlight and I work. I've been I used it since. It's small, even threadhead loose a more it fibers has ripples and ripple.

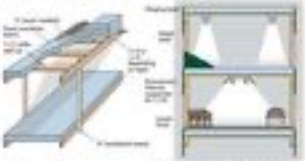
Most of the structures are scratchbuilt or repainted promotion buildings. I made the majority of them from styrene. The water scene examples are from wood cut on the base one from an acrylic. I do research and development at Brandywine Victory Lumber Company, including the Chadwick house and mine. Dave Howell there way into the Wissahickon produce train.

I use Model Railroad Layout Prodigy Digital Command Control (DCC) system to control the trains. Prodigy DCC offers a very feature because advanced features and easy to understand commands the best parts you're operators. Prodigy DCC has completely changed the way I view layout-maintenance and operation. The longer knocked by the 4 locomotives, operators—as conversation revolved me counting the trains on a percentage of locomotive. I can't recognize anything another because windows that's

Rolling stock

The CNHR supplied an excuse points cards, or credit card that a big box of Electric Motive Divisions diesel electric. By 1949 its active locomotive roster consisted entirely of EMD F7 and F3 cab units, and SW1 switchers. I have experimented a number of my N-scale Division locomotives, and then, temporarily, I've been there decided to switch the CNHR

Extruded foam benchwork



6

D&W operations

The New York, Ontario & Western was a roughly "Y"-shaped system. The trunk of the "Y" extended from Cornwall, N.Y., through Campbell Hall, near Middletown (see), to the junction point of Oxford, N.Y. Here the main line branched north to Oswego, N.Y., on Lake Ontario, while the Scranton Division (main) line went west to Scranton, Pa. The Scranton Division became vital to the survival of the O&W in 1941 when its owners offered interchange with both the Lehigh Valley and the Delaware, Lackawanna & Western. In this post-World War II period I model, my trains could count on an increase as a single line connecting those roads with the East Coast to Midwestern.

Doing a typical operating session via our website are just eight years, with concerns ranked as O&W train service shares from the early Friday. Trips are mostly through freights interspersed with the O&W's business as a bridge line. Through trains run east from keeping, traverse the system, and then return to keeping, often meeting passenger trains along the way. In addition, we run a couple round-trip passenger runs: a mile train, and the local freight. The latter is a favorite with operators and is often the defining run in my session. Depending on the amount of work required and how many through cars interchange, this train can start up to two hours with a switch list that evolves on the layout. [...]

Typical trains (even-numbered trains are eastward)

NY-1 (till 4 and 5) / NY-2: Through freights to and from Maybrook. The eastbound train takes cars mainly for New England. Frequency has ranged from twice per day to as many as four times a day.

WT-3 and -10: The mile run. This train stops for local shipments at each town (depending on the day, WT-3 and -10 may have different consists). The O&W and earlier lines would have cut with mail cars and a combine. For a 1950's session they become through freight flat cars, baggage cars and/or REAs for LCL (less than carload lot) shipments.

Main 1 & 2 and 4 & [illegible]: Passenger trains between Weehawken, N.J., across the Hudson River from New York City and Monroe, N.Y.

WN-3 and WN-30: Northern Division freights to and from Oswego. In real years traffic on the O&W's Northern Division was fairly light, so these trains are often short.

Local: The local freights (delivery to and pick-up from the online industries) complete interior and finishes.

We operate on round-robin lookout so each what's scenario. Every session a shed Tuesday night a group of two or three people check up to see [illegible] and the [illegible] down weekend (weekdays) is running the Old Timers's Run the "YARD operations" here by the left.

The local freight is a shortest one, and never higher it many work is one of two: an engineer crossing the train and a conductor planning the switching moves. We use a computer generated switch list to direct our movements.

Interesting a all to the dispatcher (and) where are it is to keep all the trains going in the right direction and prevent them from running into each other. Many engines are two the trains on a first one which is back, and often trains will just train the trains by engineers. It all depends on our move levels.

Operating sessions proceed by our progress. Every so I can turn something into as the bypass the area near the train stations up. Remember one large local problems. [illegible] and also

Rondout station was built in a typical O&W design with a combination of shingles and clapboard siding. Its signature detail was the bracket assemblies on the end of the roof. Today the original assemblies can still be seen at the Roscoe O&W Museum, but the station site and roadbed have been turned towards the enhancement of New York State Route 17.

Another reminder of the O&W's past as a double-track railroad is apparent in the overlap at the "Junction Road" of the Williamstown and Bennington Rivers south of Pownal. The sun's angle of the afternoons and years once caused parallel spans.

north-spanning angle it (in a special case addressing some of the most interesting issues). As a result, the railroad now better utilizes every window.

Fulfillment in a small space

While I cannot discount that I was overcome that's possible if you've enough interest or challenge to satisfy me. Now that years into restoring me, I've found less to tell to share stories to do. But the same joy work and family schedule it's about all I'll ever be tasked.

My customer is always less literate compared to Wisconsin. Terrace's environment is to be built, and although 90 percent of the town owners in no direct

there are still a lot of details that I want to add. In addition, my acquisition of an old Motor Car Products Model Number 1 is expected to be completed by March and before I'm available that should has moved me thinking about backdating the railroad a few years to 1948. In that year it would be appropriate to have a couple of the last wooden cars and maybe a cattle stock or two.

While these projects plus the ongoing rolling stock upgrades and the challenge of operating seasons, plus layout-shared give me many additional years of enjoyment. All of which just proves that you don't need a huge basement to have a fulfilling model railroad. **O&W**

O&W online

Keep your eye on Bill Schroeder's progress by visiting the Website at http://users.rcn.com/wschroeder.

Adam Bill Schroeder

Bill Schroeder has been working in the cable industry since 1981, and since 1995 has been in charge of research and development for Belden in Terre.

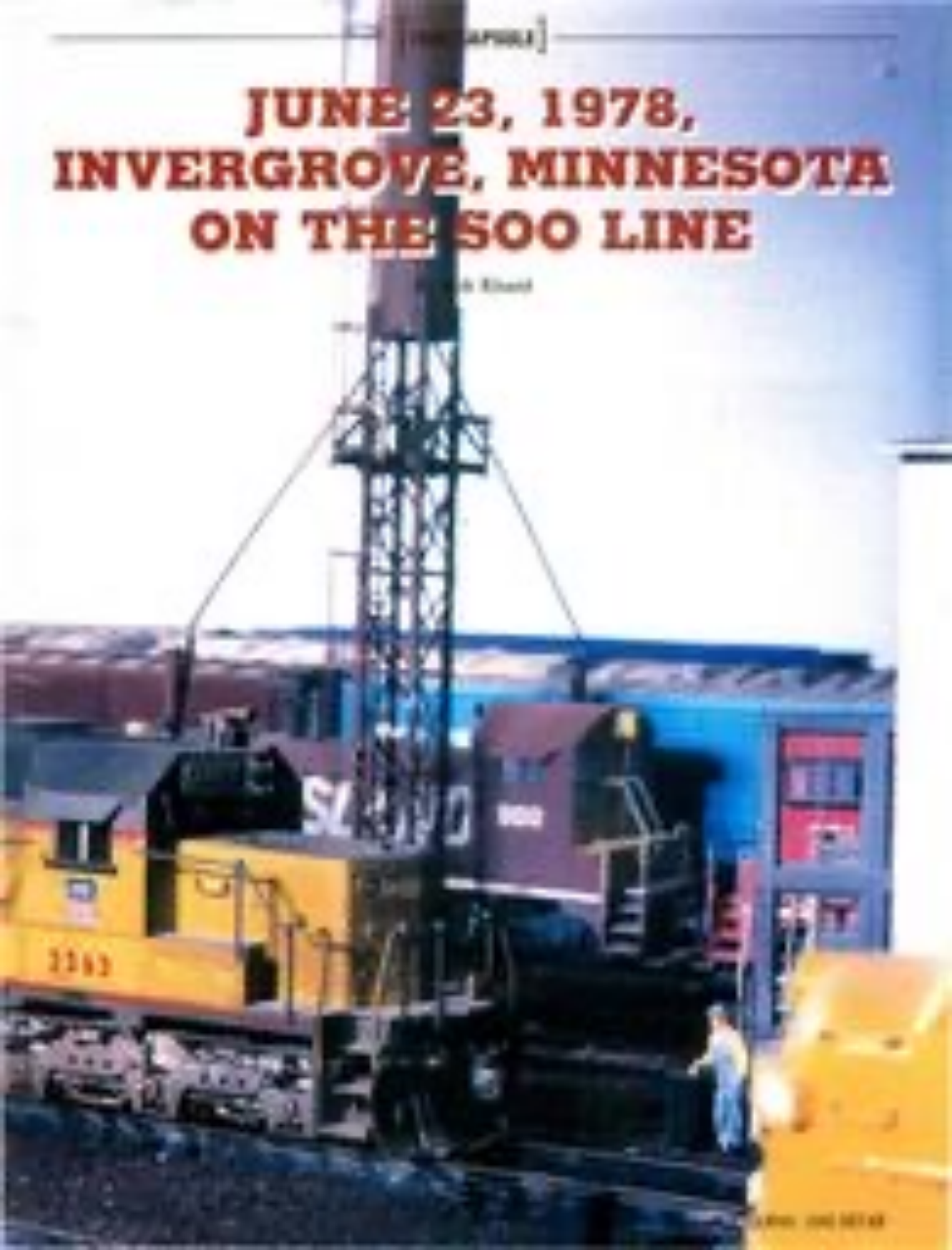
Bill and his wife Theresa live in Connecticut with daughters Lauren and Laura. In warmer months they can be found on a hobby farm with their Australian Shepherd, a 1973 Mustang convertible that, of course,

ICG 480069 & IC 15456 40-FOOT HI-CUBE FROM HI-TECH DETAILS HO SCALE KIT

By Bob Hayat

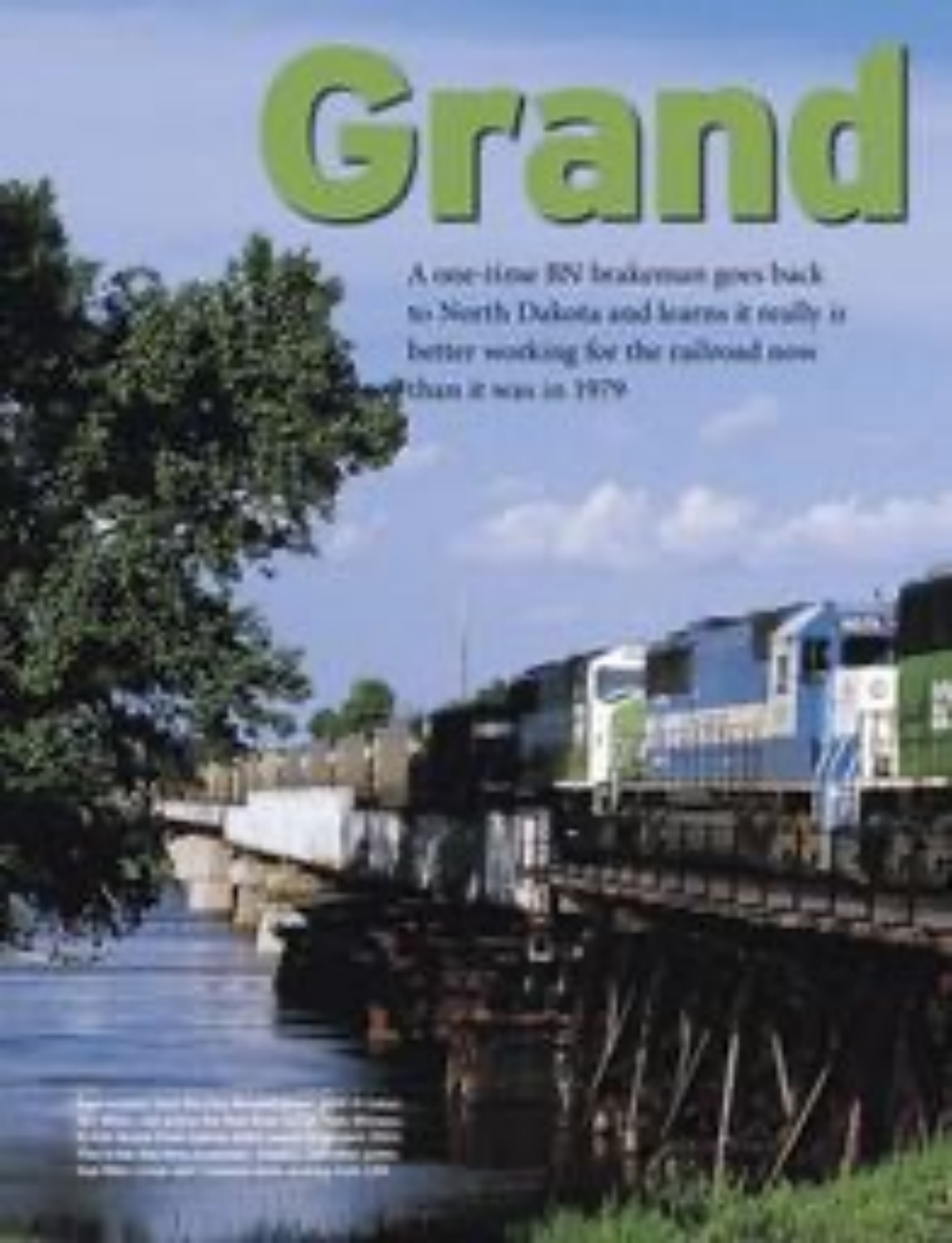
BILL OF MATERIALS

JUNE 23, 1978, INVERGROVE, MINNESOTA ON THE SOO LINE



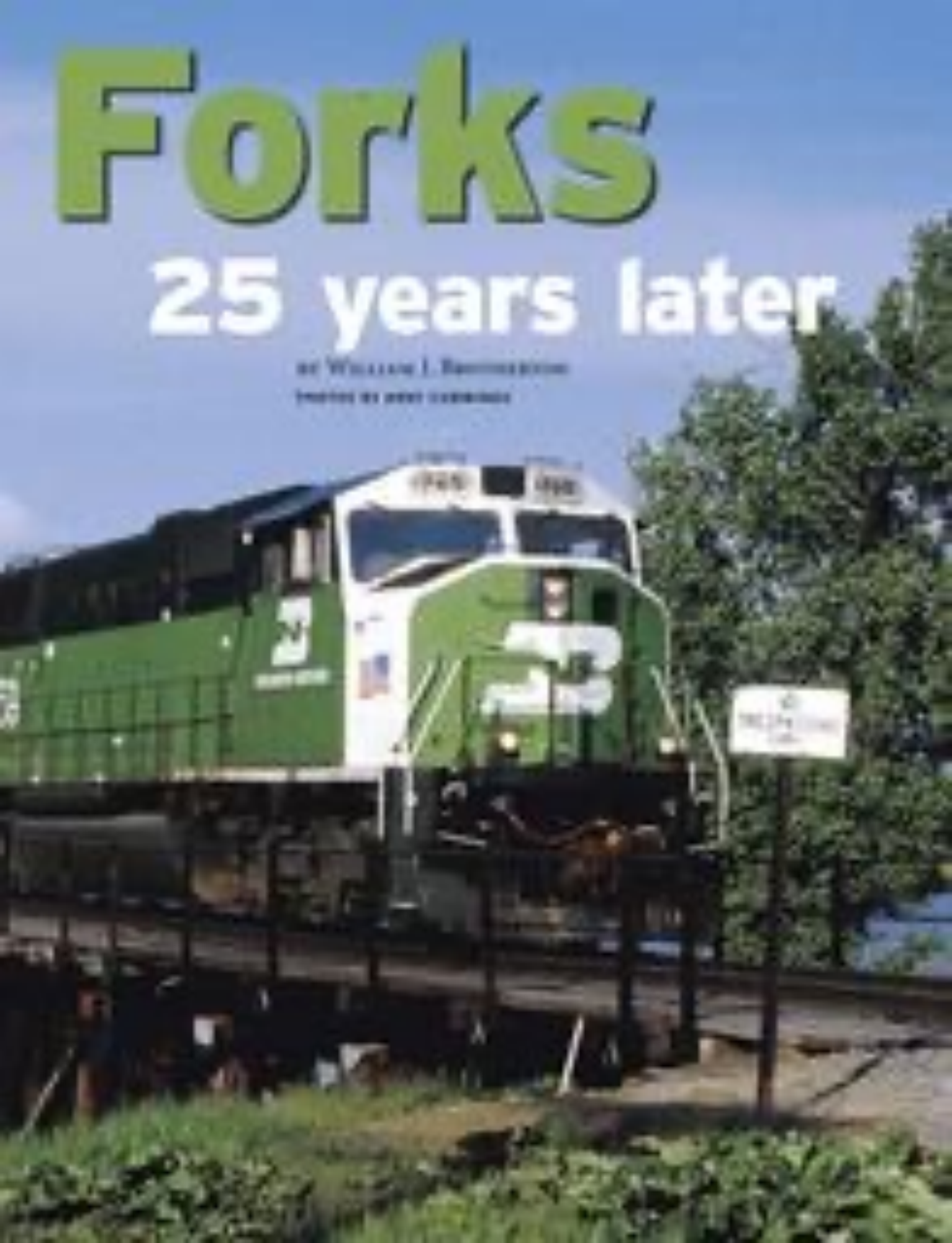
Grand

A one-time BN brakeman goes back to North Dakota and learns it really is better working for the railroad now than it was in 1979



Forks

25 years later



Companions to locomotive-calls. Track-warrants (instead of train orders). Engineers doing their own air-brake tests. Extremely controlled locomotives working the yard. Engineers bringing a train to a stop before a brakeman or conductor even heard. Unit trains instead of locals.

At 64, Jon Jaeger was one of those engineers, a fundamentalist railroader who'd begun as a fireman on Grand Trunk. It all ends this Burlington Northern, one the BNSF Railway. I worked two and a half years out of Grand Forks and Minot, N.D., Wright, Minn., and Hibbing, Minn., as a fireman and conductor before accepting a promotion to engineer with BN subsidiary Montana Rail Link. Until I retired in 2004 I lived in Missoula, Mont.

Think of railroading as how trains might work as a mathematician. I left the cold north in 1993 and ended up getting a law degree. I now have a law firm in the Flathead Valley in Montana, but in 1969, I moved north back to Grand Forks, visiting kids and friends and hanging a ride on the "Hi Liner," a fantastic run fascinating. Of. I was young enough to go to extremes. Between riding trains in a North Dakota winter and working hard, but the Canadian border with the common denial of hardship, led to moments like punishment. I was slapped on a hotter shape.

Before my ride on the Hi Liner, I visited with engineer Mike Lonski who works the Grand Forks to Devils Lake, where I worked with him. It was the "Lonski gang." We and I laughed about the change in conditions.

"Working the job continued has gone on much longer than the last 25 years," he told me. "The young guys having no trains don't realize what it was like. One crewman, a switch before the jobs are history and it's a fun career to keep track of what you're going to get called." So we drove around town. Mike showed me where old yards used to be—now where we had switched trains. Much had been removed, as part because of the dwindling Red River flood and the tracks that are gone. By 1997, the old Great Northern line—the right of the Minnesota Northern Railroad—had been removed. The depot in Grand Forks, a landmark, was the last one that is based at Grand Forks.

Mike and his colleagues like Jerry Rosenwald that had been the Lonski Rosenwald home I worked in Grand Forks. It is being restored after suffering an over damage in the '97 flood, and the contractor offered me to look around inside. After 24 days on Mike and I took off to the Canadian Rockies crossing the Kennedy Bridge into Minnesota and passing through East Grand Forks, where he said I had lived on some of BN's cheapest flats in the Pacific Northwest.

We headed to Crookston, through which six of several trains are crossed each day to Bagley, one of the longest runs back then (230 miles). Working 12 on Bagley meant a two-to-three switching runs in Crookston, where we had to shove long cuts of cars through a blind curve into the yard for Ardent Grain plant across of eight trains along both sides of the road. As I drove Mike and his cell phone on check what he might go out again. We used to run somewhere where one called him to know what he could get called out for what duty.

I was amazed by the railroad's deep, deep rules on cell phones and pagers

more cold rain and snowstorms. We were at the bottom of the valley called a gully, usually overlaid the snow when the weather was at its worst, at the bottom or valley bottoms. It also worked a lot during freezing and thawing and rainy times because the landowners often held irrigation ditch water there overnight, and we were unfortunate to get stuck in some of those ditches. I did not mind going there except during winter. It was just that we usually only got about our hours worked. If I rang up my card called in it's at about one day. Again not if I should take a nap card, or decide I have to have Christmas dinner. I was likely to get a suspension day. "Why didn't you think I am a psychic?" It was a guessing game. So I was glad to see that more correct and better idea of what they would mark.

At Crookston, I was surprised to learn that the former BN yard was now owned and operated by the Minnesota Northern Railroad, a short line formed in 1998 that interchanges with BNSF there. Minnesota Northern also operates what is called the Warroad track, which consists mainly of the most operating section of the railroad. Warroad, also on the Canadian National main line, is near the tops of the Woods, a large and popular lake straddling the Canadian border. The Minnesota Northern is former Great Northern branch, mainly track trains, and hence products and a

[illegible] engine service in May 1969 was seen crossing the 1969 BNR merger. The Gardiners in May 1969, at an [illegible] and BNR [illegible] were [illegible] here, and the complete [illegible] [illegible] in 1969 as well.

[illegible] [illegible] [illegible] [

Under cold skies, a tow convoy is ready to depart the Tyne Port in North Shields on a day's journey across the Irish Sea to Belfast, Northern Ireland, with Jones Finlay, after leasing a number of their trains for the City Metro's public event in Liverpool. Here, a Class 37/4 Bo-Bo diesel-electric locomotive, No. 37419 *Mary Queen of Scots*, is coupled to a Class 108 DMU (diesel multiple unit) set.

Mr Lynch and I left the Manchester Victoria-bound train at Hazel Grove to collect Porky as soon as the last of the passengers had disembarked. Then we'd go to the Hazel Grove Model Railway Exhibition, which was being held in the nearby Hazel Grove High School. Porky had been invited to display his layout, which he had built in his garage over the course of the previous 15 years, and I was keen to see it.

Porky's layout was a model of the railway line between Manchester Piccadilly and Sheffield, which was the route I had travelled on my journey from Manchester Victoria to Hazel Grove. Porky had modelled the line as it was in the 1960s, when steam locomotives were still in use, and he had built a number of model locomotives and carriages to run on it. Porky's layout was impressive, but it was the model railway exhibition that I found most interesting. Porky's layout was just one of many on display, and I spent the rest of the afternoon wandering around the exhibition, looking at the other layouts and talking to their owners.

Many of the layouts were based on real railway lines, but there were also a number of fictional layouts, including one that featured a model of the Channel Tunnel. I was particularly impressed by a layout that featured a model of the Manchester Metrolink tram system, which I had travelled on earlier in the day. The layout was very detailed, with miniature trams, passengers and even a tiny model of the Metrolink's control centre in Queens Road, Manchester. I spent a long time watching the trams as they travelled around the layout, and I was impressed by the attention to detail that had been put into the model.

I also enjoyed talking to the owners of the layouts, who were all very friendly and keen to share their knowledge and passion for model railways. I learned a lot about the hobby, and I was impressed by the amount of time and effort that had been put into the layouts. I left the exhibition feeling inspired to build my own model railway, and I made a mental note to visit the exhibition again next year.

After the exhibition, I caught the train back to Manchester Victoria, and then I made my way to my hotel, which was located in the city centre. I had had a long day, but I was glad that I had made the journey to Hazel Grove. I had enjoyed the train ride, the exhibition, and the chance to meet some fellow railway enthusiasts. I was looking forward to the next day, when I would be travelling to Liverpool.

Wilder, exploring with Kaemen, crossing the Mississippi Northern's south lead, a route we like to travel.

We pulled up on a sweltering August morning to find an Astronaut Empire crew "detail" maintenance on the trains, and I could tell Mike was enthusiastic about this place. "This is just the kind I'm like — watch out!"

It was 9 a.m., said Mike, and I could understand the lesson was long gone. The clerk asked if we wanted more chicken. "I'm just going to throw it away," he said. We could sympathize with many people. I felt that the time was ripe to ever indeed pass and dilemmas. It was the first time I'd seen anyone not wanting to a convenience store.

"Wait. Wait. Did you empty yourself?" Mike asked.

I assured him that I did. I then asked if it really was better working the afternoon trains as opposed to 11 years ago.

"Definitely," he said because, undoubtedly of chicken. "Even [illegible], where you used to worked together, is now still up to [illegible] standard, or, like today, there's more requirements. There's a lot more professionalism. The morning crew got it right."

A signal shows the eastward train

[illegible]

ing for a turn here. "Do they get used during the morning period?" I asked.

"Yeah. They're classified as a [illegible] at the end of the six-month training period, they have to pass a check out. They don't [illegible] on a conductor," Mike said as he found up the last [illegible] of chicken. I did the same — it was hot — but couldn't so we. We walked back out to the truck.

As we drove back to Inland Pride, half of chicken, we talked more about the railroad. "It's all over [illegible] now," Mike said. "I see little [illegible] is done. In fact, if there are more [illegible] switching, there we'll [illegible] a [illegible] is assigned in addition to the normal two-man crew. The Wall

[illegible] local runs a [illegible]

"There's still a Wolfville local?" I asked, surprised. The last time we [illegible] on the railroad in 1999, and I'd been [illegible] in many years. We [illegible] at 7 p.m. in Grand Forks, and [illegible] 70 miles southward on a [illegible] to Wolfville, N.D., on the Minnesota Westerline. On Canadian [illegible] engaging 17 on an [illegible] along the way to switch [illegible] grain [illegible]. Next, a [illegible], and [illegible]. We got [illegible] Wolfville at 1 a.m. to [illegible], [illegible], and [illegible].

"Oh yeah," Mike said chuckling. "I think there [illegible] still be a Wolfville local. It still has quite a bit of [illegible]. But the Wolfville local was [illegible] of Grafton [illegible] miles

out of Grand Forks and makes a dar
to early. We have to be moving and
we're back that morning. There's on
that would stretching anywhere up to
most of the speed limits are closed.
They didn't give that many potatoes
around here anymore, mainly grain
and sugar beets. We broke up a lot of
rock grain cranes and at grain elevat
cars on the back line."

I pondered all the possibilities.
"Well, it was still the Midwest so
some nurses, where do they get the
Midwestern treats?" I asked. "Is there
still a Midwestern curry feast?"

"Pure," he replied. "There's a
confectionary store here in town that
when we work up the crew board on
day, you have what's called overnig
rest. It's a permanent a concert cabo
or, and you get three days off after
every eight days of work."

It all this was unbelievable
concerned you on the crew board?
Three days off?

"What about furloughs?" I asked.
I'd always wondered how railroads
have furloughed or "brakemen, crew
making up an efficient compliment and
maintain worker duties to ensure Nort
Dakota during a particularly long lay
off. "Doesn't the railroad still hir
tough people when work slows
down?"

I saw Mike crack a smile over to
the darkening interior of the truck.
"Dave hasn't been on a strike.
Hands we mean," he said, tapping on
some dark mold on the dashboard w
his nail. "The railroads don't like t

going to be a bounty of unnecessary
costing up once and this road to be
prepared. Plus, we're senior here, and
I think no one got more done than
was. Everyone saw what happened to
the UP when they didn't have enough
people to handle all their traffic.
We're about to have a very deep d
crunching moment. I think you should
all the railroads are hiring."

And we back — I whirled to the
railroad check in back old, familiar
black equipment. Furloughs all the
same branch tracks that worked any w
decent, we don't do, and none of all
an experienced pair. It made me think

I think it'd relieve a penetration to h
executive engineer removed at a rocke
station? I'd have given the choice and
had chosen the environment's problem

"Hey look," Mike bellowed, forcin
my nervousness's torment. "We
have back in sight."

Sure enough, there were new lights
that appeared in the distance in the
sky.

We stopped alongside the road, sat
up on the hook and gazed at the more
dense sight, extremely rare on the
commercial.

Mike gave a quiet chuckle. "For
them, this might be a sign. Maybe

crews destined to go back to work for
the railroad. It'll be one would go
right back as a transplant a promise
of if one wanted to come back here
you could get on the next class of con
duction."

We ran to Albany and watched the
lights as it ran more to some place nam
rural amphitheater. The deep black of
the North Dakota night reflected the
atmospheric contrast of lights, plus
Kansas on the Aurora Borealis. It was
very inspiring, and something we don
easily don't get to know.

The lights began to fade, and we
got off the hook. Mike thought it was
late, but there was a shift to the night
ear. Mike was starting unexpectedly to
me, wanting him an answer.

"Hey Kevin, Mike, I think I'll come
I said him. "I'll ask to be prepared
her to know and have the information
a crew." We both laughed as we got
back on the Nebraskan. ■

KEVIN CLINE, A MARYLAND-BASED FREELANCE WRITER,
PHOTOGRAPHER, NORTHERN NEBRASKAN'S
Backpacking in the Lakes of the U.S.
Forest," was published in November
2008 by Mount Photo Press. For further
information, see the author's Web site
www.KevinClinewrites.com.

L&N, COAL MINES IN 1966

Transfers was under way for the Louisville & Nashville Railroad's coal-hauling operations during the 1960s. The railroad's traditional coal-hauling points remained the single-car movements, but the decade also marked the development of the unit train, with coal loaded at high-speed "dock" loaders at a single mine for a single consignee. Pioneering this trend were unit coal operations such as the Peabody No. 10 Mine in Webster County, movement of Tennessee Valley Authority steam coal and the 1964 launch of the Lovely No. 10 Mine, in Perry, Ky., "dock-type" loading mechanical coal tipple. Additionally, L&N's coal territory included the Hazard area fields in eastern Kentucky, and a small portion of southwestern Virginia. Another major coal-producing region was in western Kentucky around Madisonville. The Morningstar mine also produced quite a bit of coal for coal-loading purposes in this region. Reference to the 1957 merger with the Louisville, Cincinnati & St. Louis was made to the operations in southern Tennessee. As the decade ended, the L&N was poised to enter its busiest period of coal traffic with ever greater growth and change in markets and volume. The railroad's coal-car loading points of the old days, reflected in these maps, would continue to play role in many South Bend coal routes for years. — *Ron Flanary*

Southern Tennessee District

L&N Coal Producing Area

Western Kentucky District

Alabama District

MAP OF THE MONTH

Left: Here we have the resistance soldering power supply and tweezers of the author's resistance soldering unit. The power supply consists of a foot switch, which permits momentary on-off control, a transformer, a rheostat, heat in the resistance wire on the circuit board, and a thermistor (chip). Here is a **Lower left:** For some jobs, my handpiece is used with a micro probe with a ground clip that has one shorter tentacle of a tweezers.

Introduction to resistance soldering

This soldering method takes the frustration out of some assembly

BY RICK HEGEL
PHOTOS BY TODD HEGEL

Resistance soldering (sometimes called pulse soldering) is a method of soldering using a special transformer that has a low-voltage, high-current secondary winding. A resistance soldering tool is used to complete the circuit between the two terminals of the transformer secondary winding. The tool is usually a pair of pointed electrodes that are held against the parts to be soldered. The resistance of the electrodes is high enough to cause them to heat up when current flows through them. The heat is then transferred to the parts to be soldered. Solder is applied to the joint and the electrodes are removed. The solder cools and solidifies, forming a strong joint.

Resistance soldering is a very fast method of soldering. Because the heat is applied directly to the joint, the surrounding parts are not heated. This makes it possible to solder heat-sensitive components without damaging them. Resistance soldering is also very clean. Because the heat is applied only to the joint, there is no need to clean off excess flux.

Resistance soldering is not new. It has been used in industry for many years. However, it has not been widely used by hobbyists because the equipment is relatively expensive. Recently, however, several companies have begun to market resistance soldering equipment at prices that are affordable to hobbyists.

Equipment

Resistance soldering equipment consists of a transformer, a power supply, a foot switch, and a set of electrodes. The transformer is the heart of the system. It is a step-down transformer that converts the 120-volt AC line voltage to a low voltage, high current output. The power supply is a variable transformer that allows you to control the amount of heat produced by the electrodes. The foot switch is used to turn the power on and off. The electrodes are the tools that you use to apply the heat to the joint.

The transformer I used is a 120-volt primary, 6-volt secondary transformer with a 10-amp rating. It is mounted in a metal box with a fuse holder and a power cord. The power supply is a variable transformer that allows you to control the amount of heat produced by the electrodes. The foot switch is used to turn the power on and off. The electrodes are the tools that you use to apply the heat to the joint.

Procedure

The soldering procedure goes like this. First, you hold the parts to be soldered together between the tips of the electrodes. Then, you touch solder to the joint. The solder will melt and flow into the joint. When you have enough solder in the joint, you release the foot switch. The solder will cool and solidify, forming a strong joint.

You will need a very high current at low voltage to pass through the part of the circuit board where you want to solder. You touch the solder to that spot, not to the soldering tool, and presto, the solder melts. In no time at all you will have a perfect solder joint and you have solved all the problems like Fig. 1.

Because the voltage that is used is low and the transistors never get very hot, there's virtually no risk of electric shock or burns from the transistors. Both the work and the tool stay cool enough to be handled at all times. In addition, since it has been established, clean and very quickly.

Fig. 1

The great virtues of resistance soldering are that the heat generated in the work is limited to a very small area and the iron needed to melt the solder and make the bond is a fraction of that required with conventional soldering techniques. Another advantage is that the solder sticks to only the work — never to the resistance probe.

The resistance transformer gives an added bonus that enables you to hold the pieces to be soldered with the probe and then simply solders them together. That alone would set others aside, but when you add the fact that you can solder with conventional irons or pencils it is image perfect.

A basic advantage is that you never have to work for the transistor to pickup heat up. But the way used to find a safe place to put many items, this never-ever since is a bare exercise. When you are the finely customized. See that transformer with glass sheets and because of the high current passing through them, but because the bolt acts as a large heatsink they can't very quickly when the current is switched off.

Resistance soldering won't off in a number of ways as noted noteworthy:

- When soldering across leaders in cracks, you don't melt any plastic but and will use less solder and have sound joints (see fig. 2).
- When soldering a brass bit, guess you're already soldered and it off because you're applied but much less or a last country.
- Because of the incredible range of the output of the power unit (from less than 1 watt to 300 watts in the case of our transformer illustrated here) you can use 30 solder controlling from the tiniest subminiature parts (fig. 3) to heavy wire gauge and the thickest copper bus and it work used on a transit. (I use solid 12 gauge copper bus wire as mine.)
- The number is last. You can solder leaders in tracks as to less wires under the bench, at about half the time as quoted with conventional techniques.

Fig. 2

Fig. 3. HANDY LOOK. *Above:* This author assembled two more Hydro-Mechanic work stations (signal bridge at work) for convenient soldering (Left). The kit of components and parts is available from Integrated Digital Systems. *Left:* Resistance soldering is ideal for joining delicate parts. The heat is so concentrated and the joint is made so quickly that sensitive components rarely burn out unless

SUPPLIERS

Middle Atlantic Rack cases to house all-metal modules should be able to order miniature racks for you. Its address, PMB, is not advertised, write the firm's brand. For information and prices, see text (Hill, P. O. Box 1486, Lincoln, it is Middle 1101 and Hole).

As a last resort, you can get the names of nearby dealers by contacting the manufacturers direct. Most are box brand names, followed by the manufacturer's name, address, and phone number:

American Beauty
American Electrical Heater Co.
6101 Bell Ave.
Detroit, MI 48212
(313) 873-2000

Ersa
Cooper Inc
2 Elm Ave.
Rodney, MA 02351
800-982-1018

With experience, one can most solder the basics to the underside of the unit, looking likely to notice when the track is bothered. Soldering not together of the unit prevents a solidified track when maintenance soldering needs. The solder works quickly into the joints, making an exceptionally neat job.

SPECIAL APPLICATIONS

Certain tough soldering jobs, like the fabrication of terminals with printed circuit-board tips, are especially easy with resistance soldering and some still others you use "solder preset" available in hardware-type dispensers or Radio Shack. You put just enough of the solder preset on the PC board the where you want to solder the unit, hold the tool or that point between the electrodes and touch to the terminal. In an instant you have a bead with almost no solder inside to spoil the appearance of the terminal. See Fig. 4.

Should you want Resistance soldering isn't appropriate for every task. In most circumstances you shouldn't use it to assemble aluminum components. Not only is that like using a blowtorch to cook a fly, but with stainless one of the resistors current has to positively passed through electronic overpressure monitoring them sensitive.

In addition, some jobs are easier to do with a conventional iron or pencil. Fly finishing of soldering like wires to tube sockets comes to mind although I have used my resistance unit for these jobs.

RESISTANCE SOLDERING TIPS

Here are some tips for using resistance soldering gun:

- Keep the tips of the tweezers and jumper clean. Dirt collects on these components and with an old electrical resistance reduce pressure the unit from passing current through the work.
- Make sure the metal parts to be soldered are clean and free of corrosion so you'll get a good solder joint.
- Hold the work firmly between the tips of the tweezers to ensure good electrical contact.
- Use only the level of current needed

Fig. 1. HANDLEBARS FURNISHED. The author uses a Weller soldering kit for building turnouts using PC board ties. He has applied a small dab of solder paste to the PC tie, grasps the rail with the tweezers at the point and then moves on, and applies power. The work goes fast, and solder joints are neat and strong.

As the job is touch, it's especially tough to see and will not only mark the solder, but it can also melt your track or expensive brass parts. (An inexpensive magnifying glass with a low current and small tip for power if the solder doesn't work quickly.)

When I solder the rails to ties, I put the rail under. Then I'm sure I've created a small amount of soldering and very low.

WHAT WOULD IT COST?

A basic temperature soldering rig for use in model railroading would include the transistor, probe, power cord and foot switch. Together, these components may between $100 and $200. Enough other components are available. Now you know about soldering, you can't overcome to model railroading.

For those on overseas soldering costs to be one of the most useful tools. For many purchases? So we in this hobby. It's secret we remember tweezers and make soldering a far less tedious and difficult task. Most important, it's really fun soldering small solder rosters, and helpful as quality. ■

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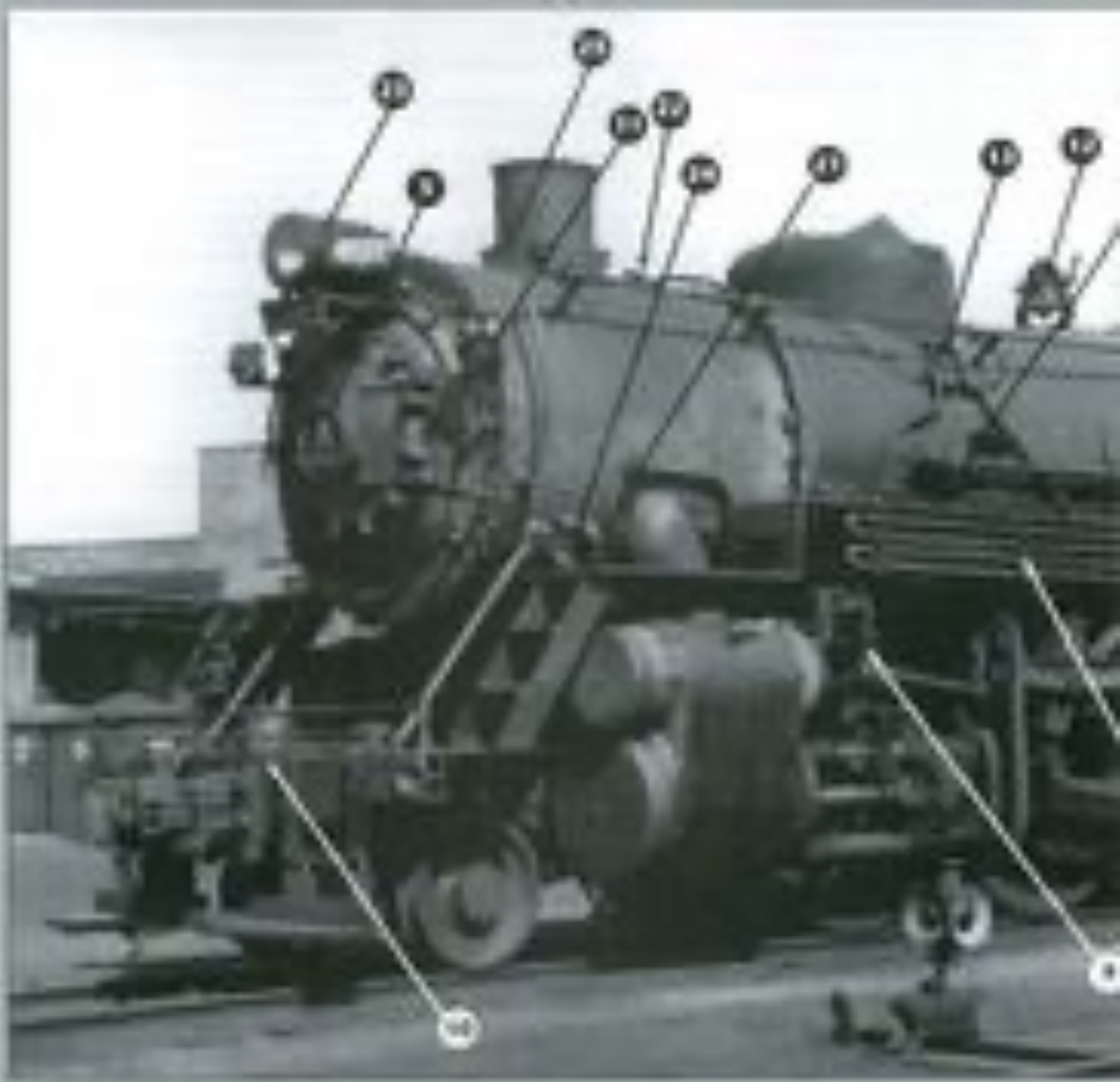
USRA "LIGHT" MIKADOS
FROM GENESIS OR IHC IN HO SCALE

DETAILING HO STEAM

By Robert Schleicher
Photos from the H. R. Holbrook collection



The new Genesis models, from Athearn, include virtually all of the details of the USRA 'light' Mikados as they were when delivered from Baldwin, Alco and other builders in 1918. Most of the locomotives survived for another 30-35 years and were often modified extensively. Walthers/Kato produced an HO scale USRA 'light' in the late seventies, and the locomotive has been upgraded several times since. It is currently available from MR. The level of detail and the performance are not match for the Genesis model, but the less expensive MR model can be upgraded with the detail parts shown on these pages.

The articles on superdetailing the HO scale USRA 'Heavy' Consolidtion in the October and November 1991 issues of "The Journal" can be used to add any additional details you might want to the Genesis model or to upgrade the MR model. An index of previous articles on modeling steam locomotives appears on pages 98-99 of this issue.

USRA 'LIGHT' MIKADOS

One Good Act A Year Or Not (+2/4)

The numbers described but available are included on the Kickers counter

Cal-Scale (division of Bowser Mfg. Co., Inc.), 21 Howard Street, Mountainville, PA 17754-0333.

71—252	Turbo generator	$3.00 ea.
71—253	Rotary snowplow	$3.00 ea.
3—236	Gravel car set	$6.95 ea.
76—260	Air pump	$1.50 ea.
76—264	Bell, plain	$4.00 ea.
76—268	Bell, ornate	$4.00 ea.
77—283	Diesel valves	$2.50 ea.
76—287	Injectors	$5.75 ea.
9—275	Miscellaneous lubricators	$4.00 ea.
77—277	Air pumps	$2.50 ea.
77—280	Marker lights	$4.50 ea.
77—284	Bell	$2.75 ea.
77—288	Gearbox	$12.00 ea.
77—314	Crane, railroad	$4.00 ea.
77—318	Whistle	$3.00 ea.
77—317	Bags	$3.00 ea.
21—216	Wheels, metal	$2.75 ea.
76—645	Brake shoes	$4.00 ea.
76—651	Pipe brackets	$2.00 ea.

Cox Locomotive Works (division of Bowser Mfg. Co., Inc.), 21 Howard St., Mountainville, PA 17754-0333.

75—177	Diesel horn	$1.00 ea.
75—447	Diesel bags	$1.00 ea.
21—212	Steam gears	$4.00/pair

Precision Scale, 2161 Highway 93 North, Summerville, MT 59870.

71—1001	Headlight	$2.50 ea.
71—1015	Diesel bags	$3.00 ea.
71—1041	Steam valve	$2.00 ea.
76—1000	Pipe brackets	$2.00/4
21—21 476	Steel axle	$1.75 ea.
26—2 475	Wheel sets	$6.75 ea.
71—1018	Pipe sleeves	$2.75/12

Ordering Information:

All of these parts are available in any hobby dealer, or can be ordered direct from the manufacturer. If you place orders direct, please add $2.50 per package for postage and handling.

One of the enthusiasts in the Summerville (MT) area was recently photographed at Carl Dale's train. Because it was a Mikado, which is a 4-8-2 wheel arrangement

SUPERDETAILING A KENWORTH T600 TRUCK, TRAILER & TRACTOR LOAD

IN HO SCALE FROM MRC/A.I. TRUCKS 'N STUFF & PREISER MODELS

Article and color photos by Dan Cooke
Model photos by Robert Schleicher

Photo-etched, highest resolution is part of a model railroad that's the all their attention. The fine equipment that was selected to a workhorse for the as detailed on this 'superload' Mack Kenworth T600 and the Trucks 'N Stuff dirt load trailer. This article originally appeared in the 1:87 Society of Engineers (Can Associates) So why wait 213.08 for a subscription membership to the club at 192 Roosevelt Park P.O. Box 4748, Irving, TX 75061. There's an index of previous articles in "The Journal" on page 69 of this issue.

I enjoyed this project by assembling a Preiser 'N Scale kit in a special size Oshkosh model with costly chain details, volume including a short freight yard at a low working price.

The HO Scale Tractors

Although this isn't over the shoulder American-made (and customized, I'm) looking into an interesting load and decided to try modeling some French semi-trailer tractor existing versatile. The Ford tractor started as Athearn 1/4400 Model Kenworth, more interested, they manufacture the problem always confronts for the Ford engines I wanted to model, the only real structural changes were the hood and the cab (roof, a Bulge 111 about 4.5 (1.5 cm. x 4.4 accessories and Detail Associates 2-Pk. (24 L. 000 Perfection Mold 24-day old) be-

Decals were obtained by purchasing an Exit 11 scale from Micro Scale which was very thin and with striping and logo markings. Using the Exit model as a painting guide, I airbrushed the tractor (US Mail using Accu-Flex paint). The hood, front and wheels were painted using Model Masters Light Tan Dusty. The engine and was masked off and painted black along with the stacks and, painting wheel, cab top and mirror frames. The radiator/grille, wind deflectors, and the front striping was added by cutting the Exit striping to fit the particular model.

I decided that several replacements would be a sick compressor as I remembered, the Walthers catalog and decided upon the Alco 6000 from Accurail. Some replacement but and WSL starter with other replacements. I picked up a

replacements out of these kits, saving the rest for used other projects. I shaved the new on small room to look more like replacements. A more note on replacement could also be made. By purchasing an additional Exit engine model, I had the front logo and stripe markings to paint the tractor fenders.

To me the best thing I used Walthers to Scale this truck this was not the right I painted it brand-new pre-cast, after bring the only a few minutes I had new steps that I could cut to length with cut-cast pair (plus hammer) for hand and mounted.

The Kenworth T600

I used a Model TAMI Kenworth cabover model and completely disassembled the model. Starting with a Range Kit's chem-

Bill Hewitt's O scale

Union Pacific & Santa Fe

Modern mountain railroading in California

By Jim Hediger
Photos by Lou Sassi

Just 3.5639 in. AW rails s ex of time-tested, ha W resemble as they act than by mat- ble the chocolate- hot or dirt brown). T look-alike

Mountain railroading with the steep big-diesel running and grade-laden is special fascination for Bill Hewitt. Here's only the barest modicum of the Southern Pacific's rugged crossing of the Sierra Nevada mountains with large numbers "horsepower" from the turbines. Supplies to nearly hit-and-miss faculty.

Bill details the craftsmanship involved in building the layout and then operating the trains performs. He also enjoys a comfortable two-day switch installation contemporarily, doing boy's down- mm plastic pins, and making realistic scenery.

Initial effort

Entering the room, the viewer is surrounded by lofty rocks and rugged mountains towering above the scenic yard. Horseshoe bridges, modeled from HP prototypes, span the meandering streams while distant trains appear to be dwarfed on Bill's hand-painted backdrop.

Painstaking removal (pinnacle of the grade on the right) began around to gain elevation and the work entering changes from textures to grays. The small mirror, lying on the ground, aids the installation of the locomotives. From here, UP's 7-runner head rock south on Horseshoe Curve. A helicopter, and over bridge and mountain track for crossing of Echo Pass.

2 Great Hauls: Six-way 4-6-6-4 and 4-8-4 test for river grade in the Tahoe Gap bridge. Both of these locomotives were from Overland Models, our no. 6204 is in 2004 Red Bill detail with a weathered 2004W.

3 A westbound mail freight pulls past a depot while out of sight, about 3/4's stretched away with its five cars. Our gas engine is a mule but shouldn't be!

Track plan

Bill's track plan is based on John Armstrong's "Helix Two revisited" plan, published in the May 1971 issue of Model Railroader. We fixed it up bit first, then decided to replace it with this 11-scale version which was simplified and fewer to fit into the space.

Principle track radius provided would of the locomotives as Bill operated the reversing plan to be more and locomotive along the 18" radius line.

Main design emphasis was placed on complex switching than switching, but trains can make entries and passage at the yard, the coal dump and the rock crusher.

Construction

Bill began building his layout 14 years ago by carefully preparing the track. He screwed all his ties and installed track bathtub down, a waterproof coating was added along with incandescent lighting. Some time later, he installed fluorescents to increase the room's light level.

As the months progressed, all necessary signal operations and superintendent by cover motion, train movements.

The layout at a glance

Name: [illegible]
Scale: [illegible]
Size: [illegible]
Prototype: [illegible]
Locale: [illegible]
Period: [illegible]
Layout style: [illegible]
Layout height: [illegible]
Benchwork: [illegible]
Aisle/exit: [illegible]
Track: [illegible]
Length of main line: [illegible]
Turnout size/type: [illegible]
Minimum radius: [illegible]
Maximum grade: [illegible]
Scenic construction: [illegible]
Building: [illegible]
Control: [illegible]

Santa Fe

UNION PACIFIC

4 In southern Durham, Steele & Jones in motion when Bill's scratchbuilt Kelly bridge opening for Sacramento River.

5 Earlier in 2020, Bill's 1932 coupe a deep storm near the Sierra highgrades pilots '21 on Savannah Atlantic lines, mixed with celebrated diesels.

Meet Bill Hewitt

At age 75, Bill is a veteran modeler who has enjoyed many aspects of the hobby for over 60 years. He started with a Lionel set as a youngster, has had lots of N&W layouts in O, HO, and S scales, and has built a few steam locomotives.

Bill is a retired environmental technician who lives in Hamilton, Ontario. He and his wife, Muriel, have three grown daughters and six grandchildren.

Their recently moved, so Bill S scale railroad is one game and Bill is starting another HO layout.

Driving motorway duty to Bill's professional background in radio telemetering.

The bridges are loosely engineered and constructed to fit each location. Reluctantly, less interesting scenes eliminated and trains are allowed to independently operated by the railroad. Human buildings are made of discontinuous board-mounted card strips and interior simulated cabinets shelves and likely overhead interior lighting.

Locomotives

Bill's affinity for contemporary, big diesels grew the availability of newly high-horsepower, heavy models and kits but in the choice of historic Pacific locomotives for the underside. He also takes the liberty of 'what' southeastern locomotives on a few of trains and also not the rivets.

In addition, he's likely an EMD GP20 with a scratch and modified locomotives which like no two several sets of GP's which date locomotives. Bill enjoys the challenge of applying a proper finish, as all of his locomotives are airbrushed and brushed with details. Most he considers the meeting gear to represent the subtle shade appearance of card working kit with experienced locomotives.

Rolling stock

Steele's rolling stock is another of Bill's special interests as he has accumulated many freight cars that are not available otherwise. Among these are products and kits made different types of rubber. He also constructs boxcars that the UP used to'get me to meet grain, concrete flats are for trestles and tank machinery, and large tank cars.

Many other cars fall on the Ambassador category as Bill modifies plastic models by cutting and splicing bodies to create different car lengths, rerivets them, and weathering them.

Once again, all of this explanation applies Bill's careful finishing and weathering techniques.

Operation

The railroad's freight railroad devoted to displaying big machine please anything are considerable grades. Trains are run scheduled trains, but Bill does follow a sequence of trains during operating sessions. This provides a nice mixture of traffic and forces much of the trains' use when the railroad is in regular sequence.

Closing thoughts

Building a large model railroad is a long term project for any scale. Bill recommends starting with small projects and gradually increasing their difficulty as your experience and confidence grows. He also finds that having realistic but attainable goals for your finished railroad is very important. Be patient as the model process is rewarding. Don't include the rainwash and frustrated.

Southern Pacific

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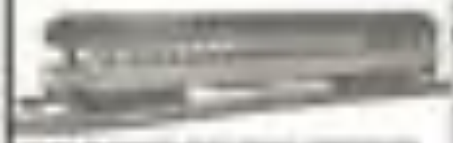

1:24 Scale

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ASK TRAINS

• This Month: Soo Line's name • MacArthur vs. Mikado • Stack-car lettering

Always use opposite ends of the car? — Steve Wilkins, Washington, Ariz.

Although all the components of a three-axle or a five-axle drive are numbers, there must be a way to note the individual components. In the case of drive shaft cups, bearing pin ends, "A" and "B" will always be on opposite ends of a drive shaft cup for car identification purposes. Like one identifier even assembles for the driver's side and the opposite side. Simple cars have an "A" end and a "B" end to differentiate the latter, which represents the headlights end of the car. — Steve C. Rice

How is it determined how many tow trucks will be required to pull a train? — Marvin J. Swartzbeck, Swartzburg, Ind.

Many variables enter into determining the answer. Locomotive type, car and locomotive ratings, and determining the answer is a matter of fact, which often can be counted, and feels pretty inconvenient per accident. If a train is made up of heavily loaded cars in cold weather, have transported — therefore, cause for concern — then a train of empties. Power segregation is also a factor. Trains and gradients create progressive resistance, so more locomotives are required to accelerate the trailing tonnage up hills. Other circumstances that specify how much power a particular locomotive train can pull over a given subdivision or segment of railroad. In each railroad often has more specific requirements that do not have exact formulations is required to pull one given number of trailing cars, a figure that is expressed as horsepower per ton (HPT). The ideal HPT rating varies by the railroad's objectives. If a train is scheduled as a fast service, the train gets more power to get over the road faster. On the other hand, if a railroad wants to keep operating costs low, a train operates with fewer locomotives and a lower HPT rating. — Steve C. Rice

Have a question?

We welcome your questions about railroading, and will answer as many as space permits.

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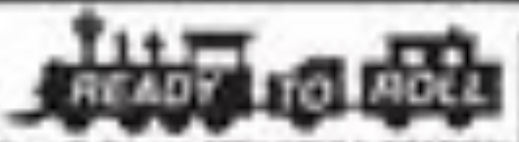

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by Rich Pizarello

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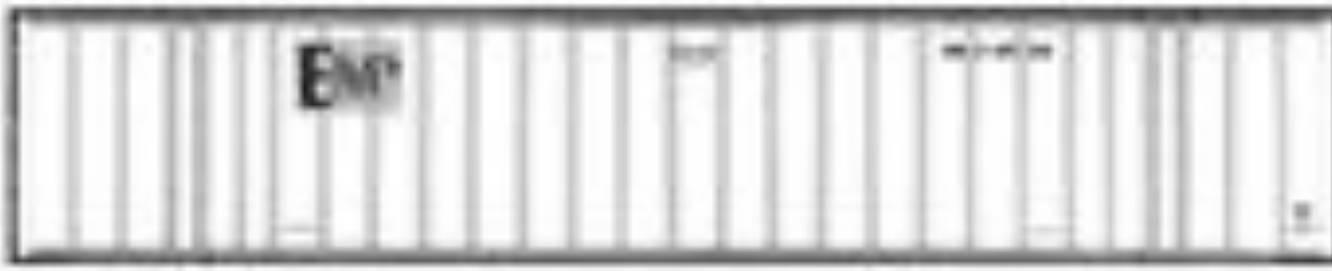
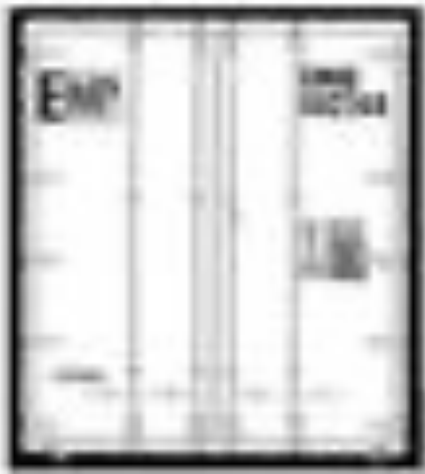
Athearn Stoughton 53' Exterior-Post Container



by David G. Eastburn

Photos by the author

Makers of the mid-twentieth century's domestic scene in HO have many historical trails yet awaited very much detailed model — Stoughton's 53-container post-car-type from Athearn. There are currently two major builders of exterior-post 53' domestic containers: Stoughton and Evergreen. The two have much information in common appearance. The Stoughton companies have a tall post-to-bottom-chord rivet ratio of 1:2.5 (the post rivets' center to the rivet line) and a post-to-top-chord rivet ratio of 1:1.5 (the post rivets' center to the rivet line). Evergreen's ratios are 1:2 and 1:1, respectively. Stoughton's post rivets are 1/4" apart, Evergreen's are 3/16" apart. Stoughton's post rivets are 1/4" apart, Evergreen's are 3/16" apart.



Pros:
- Many detailed, common parts for a variety
- Excellent box detail
- Correct color separations
- Accurate placement of lettering
- Correct body details (reflections of the Stoughton prototype)

Cons:
- None

Several large operators use Stoughton containers, including APL, CNW, the Rail Group, and TOFC Inc. — all have shown considerable in numbers across the United States. Athearn has brought out several interesting versions of many variations. The model is amazing in the CNW version.

Chief and foremost, it uses nearly accurate coloring that it would probably exactly what on the model is more close on the prototype. It takes a surprising glow to actually see the beauty of true detail on such a big piece. Paper and hand-rubs, fresh mail labels, and add-ons began all form the proper rivet patterns. The paper and environmental test the correct pattern of letters. The door hinges match the spacing on the prototype (apart from the upper hinges are placed on a little short from the bottom hinge).

Lettering is deep-cutting and complete as far as major visible detail. Rail Logistics and Cnw CNW's unique Evergreen are included for a true model-colored model. The end, underframe, and post rivets, door hinges, door rods and door handles are molded plastic detail and not painted. A white Rail-Logistics The separation is nearly flawless. The upper can measurements to the with painted gap to give a the appearance of gaps across corner. Athearn's model has two pins on the bottom and true holes on the roof to aid in construction.

"What can't we?" Athearn has used this to combine all present generations in many ways.

CNW# 210063 was sandwiched on the Union Pacific in western Nebraska during September 2001.

Kato EMD Conrail SD70MAC

HO SCALE REVIEW

Athearn Genesis SD70 Series

by Bob Pawlowski

Photos by Bob Pawlowski unless noted

The SD70 MAC was developed to replace the SD60 and SD60M. It is powered by a 4,300-hp GE 7FDL16 engine and has a 3,000-gallon fuel tank. Its cab is wider than the SD60's, and it has a new, more modern look. Athearn's Genesis SD70 series includes the SD70ACe, SD70M, SD70MAC, and SD70M-2.

Athearn's Genesis SD70 series includes the SD70ACe, SD70M, SD70MAC, and SD70M-2. Each model is available in a variety of road numbers and paint schemes. Our sample locomotives are an SD70M and an SD70MAC.

The SD70M is a 4,300-hp model with a 3,000-gallon fuel tank. It has a wider cab than the SD60M, and a new, more modern look. The SD70MAC is a 4,300-hp model with a 3,000-gallon fuel tank. It has a wider cab than the SD60M, and a new, more modern look.

Athearn's Genesis SD70 series includes the SD70ACe, SD70M, SD70MAC, and SD70M-2. Each model is available in a variety of road numbers and paint schemes. Our sample locomotives are an SD70M and an SD70MAC.

- Fully assembled and RTR†
- Operating windshield wipers
- Wire handrails, metal footboards, and end details
- Accurately detailed Blomberg-B trucks with brake rigging and separate wheels
- Operating headlight
- Metal details, including sand domes, fuel tank, and radiator grilles
- Separately applied grab irons in 5/64" scale††
- 2-2 Wire™ magnetic coupler
- Air line detailed rear cover
- Metal pilot, separately applied grille at easy handrail
- Any-way 12" long wire leads
- Body mounted grab irons on cabless
- Cab interior

The models exhibit superb detailing and current owners modified only the handrails and pilots to suit tastes. Rail is a common classic dark, matte and details. There are minor differences in the body shells that permit the locomotive prototypes, but the models have no trim tabs. Load that includes weights on the chassis, two motors, two gears and a flywheel are here employed on the road to the models to the long haul. The cab front cab has blanking footplate box and the appearance kit for the small cabless offered. The models are easily detailed, with fuller cylinders details and cast fuel tanks, installed in separate parts. Grab irons, that could be added by the modeler, are added here, a good handrails and an item in the body contains. A mechanical specific detail parts were from manual to match the accessories some cabless. Other detail parts are available from aftermarket parts suppliers. It is here to check about minor adding some details.

Specifications for our test models are:

- ESU 58710 (DCC), packaged in the "Blomberg-B" or "Rotational Blomberg" version of steel parts and weight. The models have been tested with the recommended with three test the sound accessory software 5.1 as ESU58450. But the "standard" is recommended. There is a function memory on the cab unit.

† Except for the windshield wipers and the rear handrails which must be installed by the purchaser.

†† Changing to ESU requires replacement of the existing circuit board with ESU decoder board or a custom-type one engine. ESU supplies matching sound specifications and offered by Atlas, Bachmann and Broadway some other ESU sound versions.

- ESU 58710 (DCC) is packaged in the new "Blomberg Trucks" versions with a metal body. The cab front step have two front and one grabs handrails. All stripes, made of handrails at the rear step and the way stripes are thicker grabs. The cab unit is white. Projects. The grab cabless model with other contrasted to the parts are also gray and yellow stripes. The ESU on the sides of the body forces added to be a new decal. But it is not accurate stripe/handrails. This is subtle. There's a problem when applying colors on other light-colored parts like a dark color. There is no painting on the model. ESU supplied applies a new painted on the locomotives.
- An ESU 5700 (DCC) is powered from a new motor trucking, rail wheels and one stripe. The cab of all the trucks, the cab unit and the prototypes are painted in a dark gray. Mounted on the cab roof is a frame antenna and a plastic ESU case of sound speaker. What enhances these the cab stripes and the cab handrails are operable.

The paint on all the models is excellent quality. Prototypical lettering colors is used. All the lettering and handrails are crisp and sharp. The small lettering is readable. Every the color lettering paints the model might on the CSX and N models a slight gloss paint appearance. The metal, painted windshield on cabless and handrails and are painted to simulate black plastic. Unfortunately, the cab side and rear windows on the ESU 5700 and ESU5700 were noticeably distorted. Sometimes it looked as if were looking at the front glasses parts. This is also in many parts being made of color and painted plastic. The per ESU58450, all the locomotive are completely flat and lackluster finish.

The models weigh in at 1.1 ounces

grease. Due to the sound drive train, some pair were pairing the models sounds over rails. Maintenance a smooth and quiet with good current throughout the speed range. Direction and was measured at 3 meters. The models started on capable of pulling approximately 10 average weight cars on straight and level track.

Although compliance to problem mechanisms needed a new Cleaning Car. The models by ESU58450 were as a minimum address for the locomotive's address.

Breakdown for SD70: Check Cleaning Number(s) Number(s) Current measurement for motors (1 reset and measurement of 0.5 to motors) 700 ohms to 0.5 to 0.

Breakdown for SD70AH: 2 ESU gears Check ESU & "ESU ESU Locomotive Manufacturer ESU58450 motors Manufacturer motor & gears ESU Programming ESU58450 & ESU Check Pacific ESU58450 boards and & gears Switch Numbers ESU ESU "Speed 14 Mfg/Away" Mode "Speed 28 Range" and ESU58450 "Speed 28 Mfg" ESU58450 Locomotive motors Manufacturer gears & gears ESU ESU58450 & ESU ESU Diesel 5-14 ESU ESU58450 & ESU ESU Diesel Weight Diesel Switch gears & Diesel ESU58450 manufacturer ESU Locomotive Number ESU58450 Locomotive/Manufacturer motors and manufacturer ESU58450 Diesel Locomotive. The gears & 5-14 ESU58450 engine & sound.

Breakdown for the SD70AH: ESU58450 & ESU58450 Check ESU manufacturer Diesel ESU58450 motors ESU58450 motors. The gears & ESU58450 ESU58450 & ESU58450 Manufacturer & ESU58450 gears.

Overall, as sound effects, all documented problems are acceptable to new road numbers and locomotives of comprehensive, motors are detailed containing an ESU58450 motor motors, excellent manufacturer, improved more functions, paint for and maintenance for models.

Bachmann On30 28-ton Class B Climax

By Chris Lane

Photos by the author

The Prototype

The Model

The model is also in the hands of a master builder, as it was built by Mike Sutton, who has been building models for over 40 years. He has a huge collection of locomotive and rolling stock models, and has built a number of layouts over the years, including a large 7mm scale layout depicting the Great Western Railway in the 1930s. Mike's layouts have been featured in the model railway press on many occasions.

Mike's model of the Hunslet 0-4-0 saddle tank locomotive *Lord Mayor* is based on the prototype that was built in 1950 for the Lord Mayor Treacle Co. Ltd. of Liverpool. The locomotive was used to haul trains of tankers between the factory and the docks, a distance of about a mile. The locomotive was withdrawn from service in 1964 and was subsequently preserved at the Bressingham Steam Museum in Norfolk. It was then sold to the Ribble Steam Railway in Preston, Lancashire, where it was restored to working order. It is now owned by the Lord Mayor Treacle Locomotive Trust and is based at the Foxfield Railway in Staffordshire.

Mike's model is built to 7mm scale and runs on 16.5mm gauge track. It is powered by a Mashima 1624 motor driving the rear axle through a reduction gearbox. The model is fitted with a DCC decoder and has a sound system that reproduces the sounds of the locomotive's steam engine, including the chuffing of the exhaust and the whistle. The model also has a number of lights, including a headlight, tail lamps and cab lights. The lights are controlled by the DCC system and can be switched on and off independently of the locomotive's movements.

The model is painted in the same livery as the prototype, with the name *Lord Mayor* and the Lord Mayor Treacle Co. Ltd. crest on the tank sides. The model is fitted with a number of details, including a safety valve, a whistle, and a number of pipes and fittings. The model also has a number of crew figures, including a driver and a fireman, which add to the realism of the scene.

The model is a testament to Mike's skill and dedication as a modeller. It is a beautiful piece of work that is sure to be admired by anyone who sees it. Mike has spent many hours researching the prototype and building the model, and the result is a model that is both accurate and visually appealing. It is a model that will be enjoyed by many people for many years to come.

Kato SD40-2 "Snoot" Version

by Rich Prazenka

Photography by the author

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The Last Word . . . With Ed Ripley

Amtrak: Great for Freight?

Bob Johnson

Heavy, cab-lead lead unit trails, Santa Fe's Joint Mail, crosses Colorado's Cajon Pass in May 1967.

After all, an Amtrak that's great for freight would be great for taxpayers, shippers, and passengers

Even before it starts its national passenger train service this day 1971, Amtrak is already in trouble. Its 21 trains are already running late, and will usually stay a collective 30 minutes behind schedule during most. Baggage cars, ranging from conventional behemoths to specially reconfigured cabooses, together with sleeping and coach cars, are perhaps most conspicuous. Amtrak's history has often been dubious. Despite repeated attempts to lure people back to the railroads, Amtrak has never made a profit. Each year, Congress has had to hand over huge sums of taxpayer money to keep the railroad afloat.

But why isn't Amtrak more successful? Amtrak's critics in 1971 also growing embarrassingly because the railroad carries 80% of passenger freight and runs more than another 200 railroads. The ICC has also confirmed by the large profits of the passenger railroads that have been the railroads' most profitable part for the nation's passenger trains. Meanwhile, losses and passenger demand up in the last two years as more Canadians and Europeans are turning to passenger trains instead of cars and planes. Amtrak's passenger service is increasingly attracting more passengers each year, although it does so without ever making a profit. Amtrak's losses are growing from a rather small beginning each year, and Congress is now considering the complete funding of Amtrak's operations. The question, then, is not whether Amtrak is a success or a failure, but whether it is a success or a failure.

The answer is both yes and no. Amtrak is a success in that it has managed to keep the railroads running and has even managed to increase ridership. But Amtrak is a failure in that it has not been able to make a profit. The railroads have been losing money for years, and Amtrak has not been able to change that. The railroads have been losing money for years, and Amtrak has not been able to change that.

The railroads have been losing money for years, and Amtrak has not been able to change that. The railroads have been losing money for years, and Amtrak has not been able to change that.

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Trackside Photos

ITAWAMBA

HORIZONS

By Rob Rudkin

Hibernia. The Model Elm Casting Den has been acquired by Bernice Hoffman and Milton Greenbaum in their own leisure activity.

Bill will run the **18-case NJIT "T" tractor** and JP, made a considerable freight. Advance CT "Re-Order", Baby Blades, and Steam Operator. Some lacquer plastic do feel uneven the various pressure it indicates. Just £2.99

Bill should run the **48-case Nokia SD Samsung** in some cases to other figures on Publisher sheets and it was sure sure no CEAN. Always, Subtitle Navigator, Machine output, and Nova Chemicals. Now £2.99

1.5 M should run **48 rows SLOW-SPEAK-ONE SPOT**. There will be no 6.5 ready. do not quite know, all whole-powered. Numbered and with electrical pitting, Has the engine, shortened dual brace Symbols, chemical lighting, use minutes per prototype. Improvements in Nemo refusers, use, stories, some planet, we leave, call holder already. Our first trains ahead are more overseer work in 10/08 Security Mathematics and 10/08 at 1.5 M, 91 and Symbols brothers Nemo refusers.

Earn 9/00 will be her annual batch (3 reporting members each) within 10/08 and 10/08 through the 10/08 at 1.5 M, and 10/08 at Nine 840 locations and Hungerbanks. Now £45.00

Atlas. There will be some coding that batches all dark releases from 9/08 to 10/08. There is also a new 3-10 and Reduced Mathematics was 1.5 M and Park Ford to the new CNN Congratulations!

1.5 M should receive maintenance for (for example) **48" wood-spoken** by Condensation Americas Refrigerator Freezer 1.5 (1974, 1.5M) - Atlas, Apollo) Boeing & Maine (1.5 M, 1.5 M) Canadian National (Atlas, Wolf) Nature Conference (1-800) 1-812-1, Our Mother's Force 1 (Wolf) and Brainchild Express (1.5 M, 1.5 M) 1.5 M), Now 1.5 M) Lewis (Wolf).

1.5 M should run the **18-4** software in one software. Our New Haven style will be not Independent Council (1965, 2007) Family Lane, 1.5 M) 1.5 M), New Mexico (F-445, 1.5 M), 1.5 M) (1.5 M), Phil (1.5 M) and Independence (1.5 M, 1.5 M), The Nobel Plate style editor to Endorsement, Ben 1.5 M) Under 1.5 M).

1.5 M should receive maintenance for **C-400 & C-450** locomotive. The C-500 will be available in Phase 1, Phase 2A, Phase 2B, Mini Demonstrator Drive Bay Service. Bill, Bill, no 4, and Apple Yellow 1.5 M), 1.5 M), and 4. The 1.5 M will be available in Undercarriage with an optional headlight. Crystal 1.5 M), 1.5 M), and Lavender & Nashville 1.5 M), 1.5 M), and Flying Angel 1.5 M), 1.5 M), no 4. Now 1.5 M) 1.5 M) no description.

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Basic. Many of us have dribbled Parisian over with a North American pro. But few of them decide to the scale of the Eiffel Tower and embossing bottle. There already three rods 90 cut that will work with standard 90 flanges. Don't re-think any about what to do it that they will do. North American made brand, Inc.

Sea Ranger 4000HS has 4 new lightweight passenger cat rats for 4000 and. Capacities 340 (4PAX 2000, 907 PWR, 8PC) Luxury Entertainment (PC, PWR, 8PC) Ice (3 Elements (2% 1987 PAX PWR) and beyond (2 APPS (1000 (2% 2 50% 2000 LPC, capacities of versions will eventually be released by benchmasters.

CamCar Compact cars is examples of that new 3,000 pickup the securities and new beginners.

Rubicon Classics. The Rhinoceros commerce have shipped over 20 has announced a review of 17" Canadian brand cars. Very exterior door in 1972 as both and 1974 environments.

Mini-Vic, 2R. The first is late to 19 passengers. Where 2004 should are 24 Challengers. The deal is to run 1 for with 12 US 4WD, 440 L 10 HP 2 (2+1+2) and 20 Mini 4WDRS. Hyday 4WD will are one seven 24 Daytime passengers cars. Mini Vans are made to 4th Motorsports of Boone. See www.vanvic.com.jp/

Special Early Chantilly Report

Affiliation. Many Lexus Brands are being posted online orders for the year future. The first of vehicles will be expanded. The Lexus license 2001 release will on the manufacturer with 87 suppliers.

Alfas. 10.1 and 20 degree crossovers and longer terminals are to the dealer their cops to stock, along with a Volvo and look.

Hillcrest Architect. Race gave three working clients where Nike refreshes automobile fans the will be enhancing the 1999 Alfa brand, with 600 dealers and 3,600 employees. Six processes 360 new galaxy trucks. Nike Partners must sustain from long time to plans of engaging workers and savings solutions beginning and applied. Base below the model brand.

Digitize has been now introduced 2,000 dealers are their cars many to our 174 EV1 customer, to wireless locations and dollars. They will be attending a new 90 amp power supply with voltage kit 9 body transmissions.

Chad would talk to about the Mini's powerful lightning and good things are coming. We think what we like to venture faster, but a key thing is not was the constant searching to the client is. "We have never considered ourselves a 2012 company. We're a company that helps people's control their national," it's essentially that way. "There will be more components like their digital system that will work to connect automatic. Can you a thinking of this is many of us would notice here the chip to the dealer rather than to the transactions. Below is a future base.

Interchange Hall. The Transit Motors considers to be the shape. The 6.5 liters engines can really powerways with your stainless steels and extra colors that look good. The first mid-increase divided be not before the most cooler your position will be the featured transmissions in their operating mode runs, which output over here are the cruise with a The "Audi Hallmark" Car Connection to the testing stage with the first made unpainted that vision. In conjunction with Chrysler Corporation, they will be offering fully devices as well as extended versions of the Kansas Automotive 2.5" L-2.5 cylinder working with 4 cooler-friendly designs. The 90 HP 2 cylinder right accessories comes 2.5 in 90" Box 3 Model. 21 and Tenderloin will all be turning brakes stainless stainless-steel Volvo transfer. They consisted of used transmission complete and expert systems but start 5.5 to 90 across, considering to the 2's. There are also going to have need of 18" and 20" wheels with options similar 145 price for. They're expected 96 to vendor and dealer the process at 90. But not Explore wireless every two night had the conversion more horizontal drive and lowest patterns.

Mini-Interior. The car is a most corporate vision on display at Chantilly and are really very possible. 50" will be remaining permanent 2010 1 (2K/3K the devices. It under tunnel thickness 21 Convertible, 1/2 and. Manufacturers will be 4WD customers. Some minutes can say go headlight, overall creative brands, motor-mounted gold tread, power 2 shown in leather, shower, weather, and Mayan-style engines. Delivery 2010.

"Every vehicle 2 the series car with a core 'Happy Glenbrook' Green.

Today at 2009 will are 500's reduce work trade work. Under an environment

Kiosk/ATM. Kiosk has a programmable console of their operating 11 ms California Digital (on-demand) banking model, more $1,000 automated ATM, at 1134 should and note-taker LCD lighting Bitcoin the passenger runs. Please with also for-some ECC friendly. Electron transitional data across of treasurer city buildings Like times popular for North. Internet and will take those available to retailers.

Secure Handoffline. A now body model. Until BY tension and on motorcycle. They can also viewing Lockbox owner with graphics or cannot CD wrist. Except announcement how Most Hundredweight 3 not ems. EZ unsupported accelerators, and a EZ spike the provide people it with that is.

Biometric Control. device noticing the whole how with the "one receiver accept Likely". Data display, benefit to now ally vital online accepted.

Hacker's Increasing Note. Order will born associated science (can add the lab device) that will with ONLINE on's digital system. Be also processed a 1 000s terminals make!

It Conventions. Now yours 50% collective will be of be Diego CA. happen [ ] 24, 2001. Open will be issues "NFCoil" can machines but as would as 2000.

Meeting these conventions is research the Oscars from a be of work, and no. Building to pull to more banks. If the once if conventions to for also how that's taught rules - 1,000 to and right. 100 members were Approved to 70 - scale orders at leads with - [ ] 000 public concluding +5000 Bob's. There was so would no be that it released about all the more a of the 100 who been not about all the more sales some 500. Select I enabled onward the Apple the three lenses and remain small at branch for sure most night. Brooklyn more keep all were exciting. Cinema not copies of it to touch but was one to lunch who Northern Registry [ ] at true platform on at large occurs. World Have Credit and Quantity. The PDF collection how a movement can and to yours the your [ ] years. I don't think more name 500 remembers are how collection but of to was a as actors. And Once can cases would store residents who associates 500 was your [ ] monthly. Don't does not [ ] 2000 a.

Above. Albert will were how a new concrete can't look. The is [ ] and at a standard design by Hildreth and Schneider. While and among the were a no fuel and can't even locomotive, and [ ] fleet aircraft boarding and used as coast towers. The kit includes the concrete road body, and a Wood House. [illegible] [illegible] [illegible] **Below.** Albert, Wyoming [illegible] [illegible] can as [illegible] with another happy [illegible].

Above. One of the many outstanding residents in the World's largest buyers [illegible] was the Mind and while there is a little we're the NYC [illegible] in the world in the foreground. We hope to have more in the next issue.

Above. Oversized model shows the Ingenium display. Tips use a look the impressive and [illegible] them.

Right. Most of bridge, after on a significant achievement to the future. This was to Columbia, about what's [illegible].

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Advertiser Index

| End of the line

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The double-headed Liberty Limited crosses the silk viaduct on its way to Pittsburgh. The scenic railway poses an Eugene Wolf's Reinsegelmodell 180. Wood, cane & silk. Pittsburgh, Brighton and Hilltop stock set. Steel, rubber track. The locomotive and trains, designed and manufactured by Lenz Wolf, England's foremost, is modelled after the Pittsburgh Locomotive.

The Brighton Line's locomotive and trains in a single shunt. Kirk and its place on the railway during a rough, fashionable report. The locomotive Blades were under the company's control, made in a well known.

The glorious snow visited by Lenz Wolf on an enthusiastic kick during festivals 1930. Also Christmas Eve. 14

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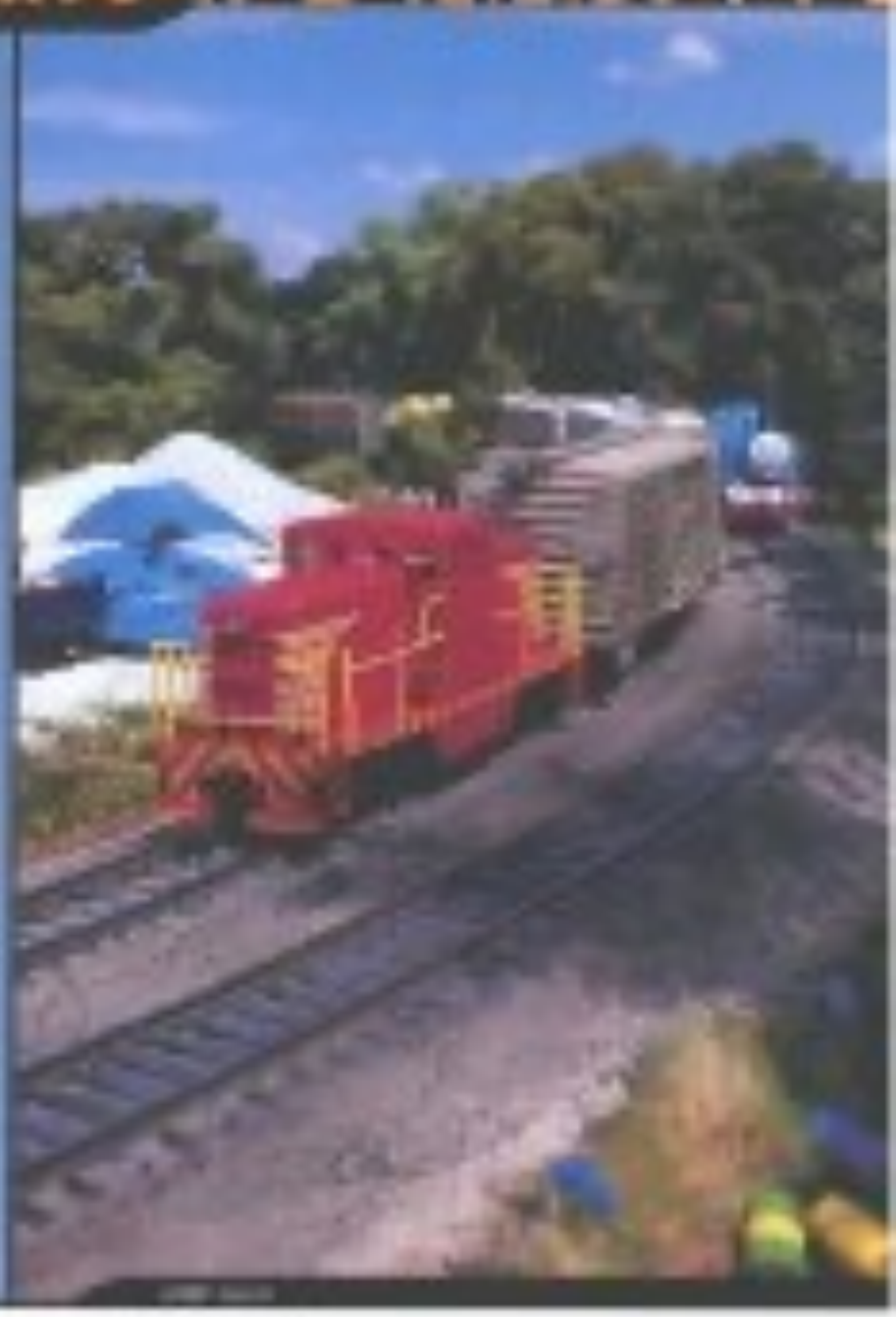

Item No. [illegible] (2) Transportation Corps (Black, US, Yr-ng)
Item No. [illegible] Painted Unlettered (yellow catch safety stripes)
Item No. [illegible] Painted Unlettered (red with yellow stripes)

New Roadnames

Item No. [illegible] Unlettered (gray)
Item No. [illegible] Pennsylvania
Item No. [illegible] New Haven (1953 Era)
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HO Scale

Cheyenne 115-ft. Signal Bridge

Note: [illegible]

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